MHC-2300

SERVICE MANUAL

HA 2488

West Germany Model

- MHC-2300 is composed of following models. As for the service manual, it is issued for each component model, then, please refer to it.

COMPONENT MODEL NAME

AMPLIFIER	TA-H301
CASSETTE DECK	TC-H201
TUNER	ST-H300
SPEAKER SYSTEM	SS-H2500
CD PLAYER	CDP-H300

PARTS LIST

NOTE:

- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

ACCESORY & PACKING MATERIAL

Part No.	Description
1-465-412-11	REMOTE COMMANDER(RM-S200)
1-501-374-11	ANTENNA, LOOP
1-575-667-11	CORD (WITH CONNECTOR)
*3-354-980-02	CUSHION(for TC-H201)
3-707-584-01	COVER, BATTERY(for RM-S200)
3-752-014-41	MANUAL, INSTRUCTION
4-920-941-01	SHEET, PROTECTION(for CDP-H300)
*4-929-703-01	CUSHION(L)(for CDP-H300)
*4-929-704-01	CUSHION(R)(for CDP-H300)
*4-932-847-01	CUSHION(R)(for TA-H301)
*4-932-848-01	CUSHION(L)(for TA-H301)
*4-932-849-01	CUSHION(for ST-H300)
*4-934-446-01	INDIVIDUAL CARTON(for TA/TC/CDP)
*4-934-468-01	INDIVIDUAL CARTON(for ST-H300)

MINI Hi-Fi COMPONENT SYSTEM

SONY®

MICROFILM

9-955-918-11

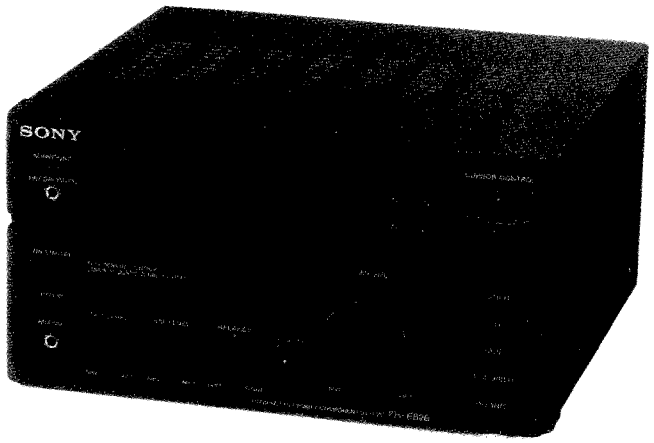
Sony Corporation
Audio Group

English
90E0415-1
Printed in Japan
© 1990. 5
Published by Customer Relations and Service Group

TA-H200/H300

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
Australian Model
TA-H300
E Model
TA-H200/H300



TA-H200 is the amplifier section in FH-E929.
TA-H300 is the amplifier section in MHC-3500/FH-E828.

Photo : TA-H300

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (for US, Canadian model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads both channels driven, from 50—20,000Hz; rated 30 watts per channel minimum RMS power, with no mote than 1% total harmonic distortion from 250 milliwatts to rated output.

Continuous RMS power output (AEP, UK, West Germany, Italian, E, Saudi Arabia, Australian model) 45+45 watts (6 ohms, at 1kHz, 5% THD)

Input	Sensitivity	Impedance
AUX (phono jacks)	450mV	50 kilohms
CD (E, Saudi Arabia, Australian model) (phono jacks)		
MIC (minijack)	1mV	600 ohms
PHONO (phono jacks)	2.5mV	47 kilohms

Outputs

HEADPHONES (stereo minijack)	Accepts headphones of 8 ohms or more.
SPEAKER	Accepts speakers of 6 to 16 ohms.

Power requirements

US, Canadian model: 120V AC, 60Hz
AEP, West Gerrmany, Italian model: 220V, 50/60Hz
UK model: 240V, 50Hz
E, Saudi Arabia, Australian moodel: 120, 220 or 240 V AC adjustable, 50/60Hz

Power consumption		TA-H300
US model		120W
Canadian model		170W
AEP, West Germany Italian model		120W
UK model		230W
E, Saudei Arabia, Australian model	100W	110W

MICROFILM

INTEGRATED STEREO AMPLIFIER

SONY®

SECTION 1
SERVICING NOTES

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

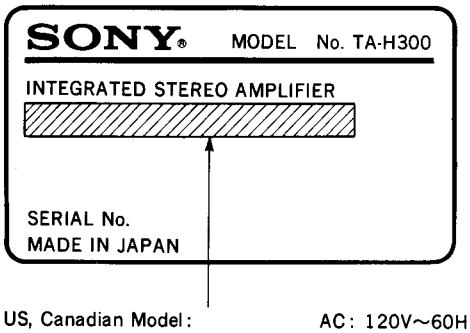
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MODEL IDENTIFICATION

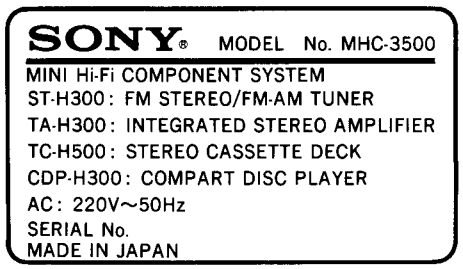
—Specification Label—

TA-H300

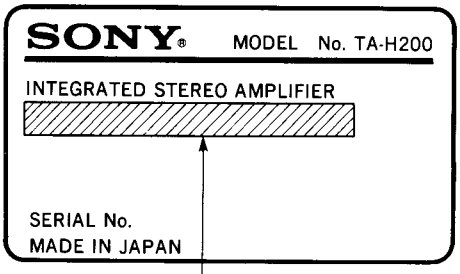


US, Canadian Model: AC: 120V~60H
AEP Model: AC: 220V~50/60Hz
Italian Model: AC: 220V~50Hz
UK Model: AC: 240V~50Hz
E, Saudi Aradia, Austraiian Model: AC: 120/220/240V~50/60Hz 110W

West Germany Model:



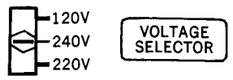
TA-H200



E, Saudi Arabia Model: AC: 120/220/240V~50/60Hz 100W

On operating voltage

Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

Where purchased	Operating voltage
US, Canadian Model	120V AC
UK Model	240V AC
AEP, West Germany, Italian Model	220V AC
E, Saudi Arabia, Australian Model	120V, 220V or 240V AC adjustable by AC voltage selector 

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

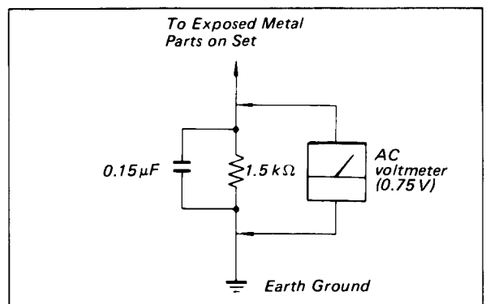
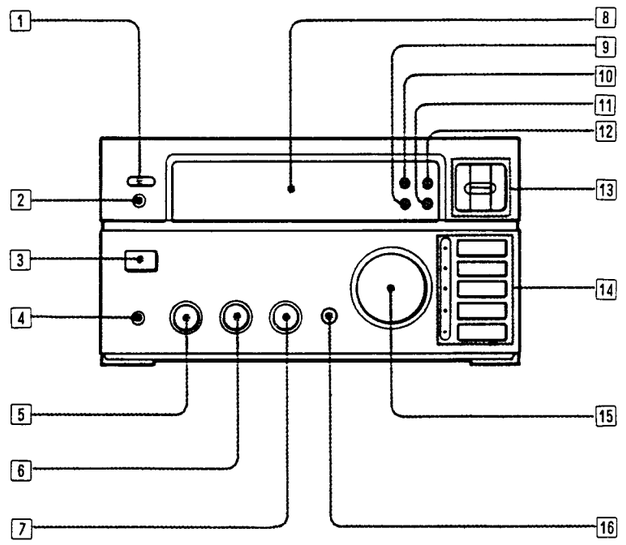


Fig. A. Using an AC voltmeter to check AC leakage.

SECTION 2
GENERAL

2-1. FUNCTION OF CONTROLS

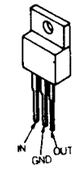


1 SURROUND button
2 HEADPHONES jack
(stereo minijack)
3 SYSTEM POWER Switch and
STANDBY indicator
It remains lit as long as the AC power cord is connected to a wall outlet.
4 MIX MIC (microphone) input jack
5 MIC (microphone) LEVEL control
6 DBFB LEVEL (Dynamic Bass Feedback) control **(US, CND, AEP, UK, WG, IT model)**
SAT control (E, EA, AUS, model)
7 BALANCE control
8 Display window
9 MEMORY button
10 DISPLAY button
11 CURSOR PRESET/EQ button
12 EQUALIZATION button
13 CURSOR CONTROL buttons
14 Function selectors
15 VOLUME control
16 PROGRAM FUNCTION button

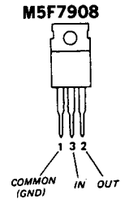
3-1. CIRCU

3-2. SEMIC

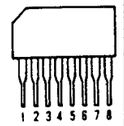
M5F7805
M5F7808
M5F7812



M5F7908



M5218AL
μPC1237HA



witch and

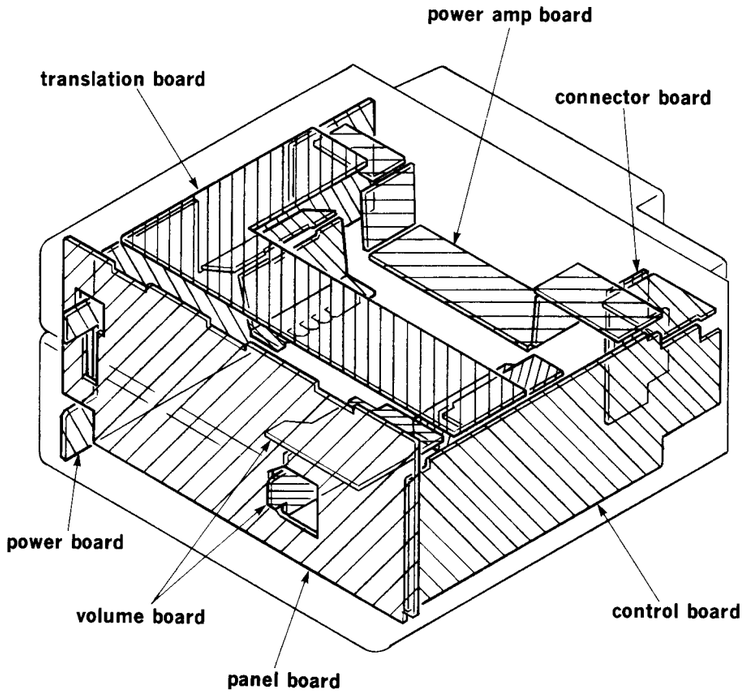
as the AC power
a wall outlet.
e) input jack
EVEL control
nic Bass Feedback)
EP, UK, WG, IT model)
AUS, model)

EQ button
on
L buttons

ON button

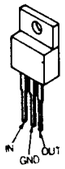
SECTION 3
DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



3-2. SEMICONDUCTOR LEAD LAYOUTS

M5F7805
M5F7808
M5F7812



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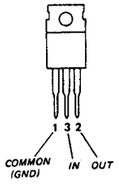

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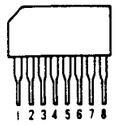
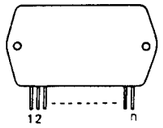
μPC1237HA



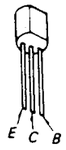
STK4152II



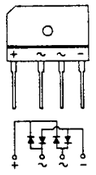
DTA114ES
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC2603-EF
2SC4113

2SA1175-HFE

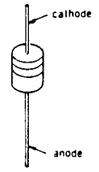
2SB1013-4
2SC1841-PAFAEA
2SD1387



RBV-602-01

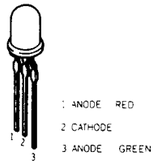


UZL-6L3
UZL-303SC
1SS120
11ES2



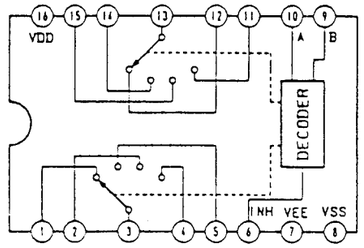
SEL1210W

SPR-54MVW

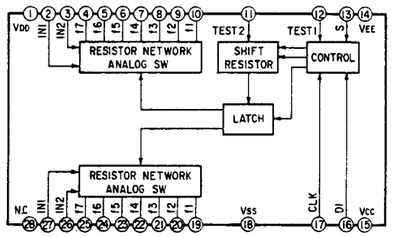


3-3. IC BLOCK DIAGRAMS

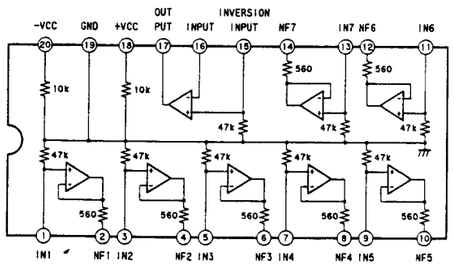
• IC102, 103 TC4052BPHB



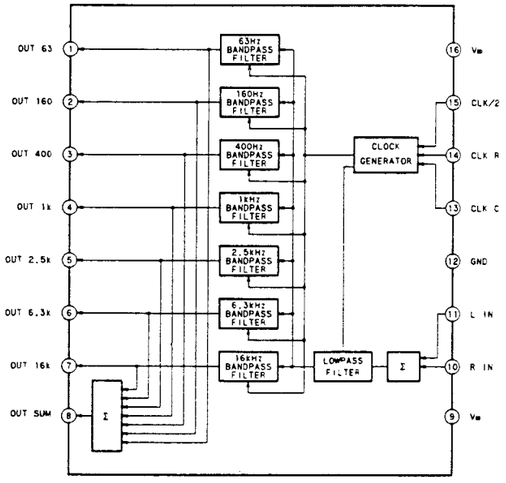
• IC106 LC7522



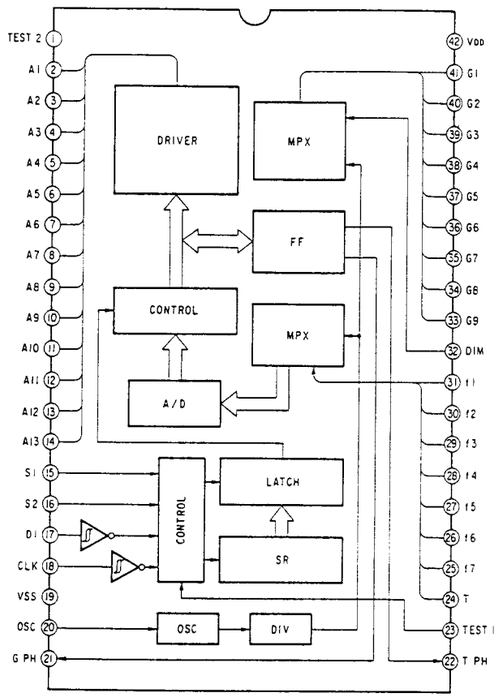
• IC107, 108 M5229P



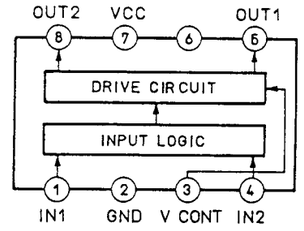
• IC412 XR1091



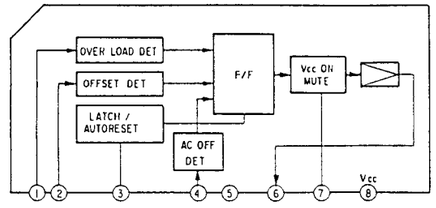
• IC503 LC7565



• IC701 LB1639



• IC802 μPC1237HA



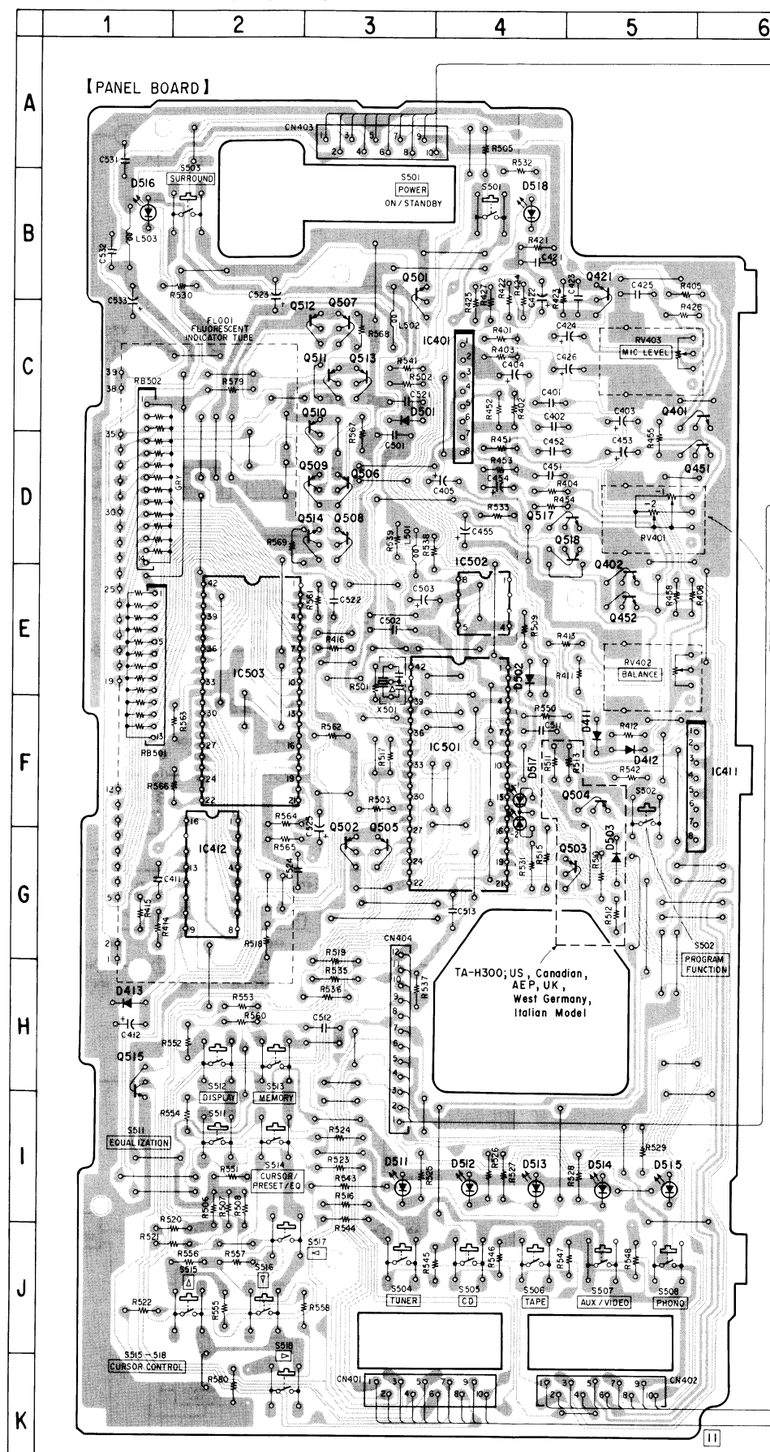
• Semiconductor Location

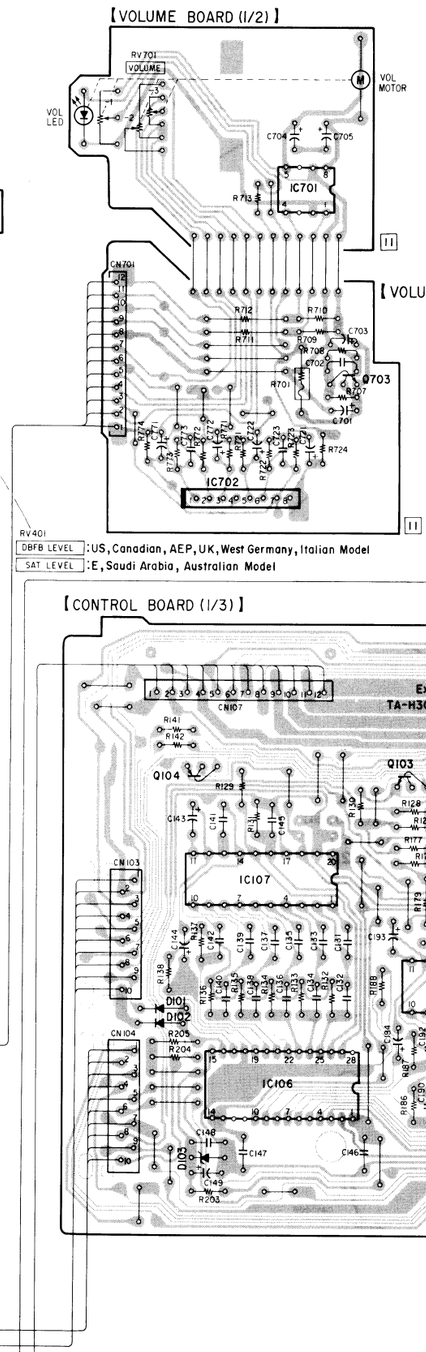
Ref. No.	Location	Ref. No.	Location
D101	H-7	Q102	G-10
D102	H-7	Q103	G-9
D103	J-7	Q104	G-7
D301	H-11	Q152	H-10
D302	H-11	Q401	C-5
D303	H-11	Q402	D-5
D304	H-10	Q421	B-5
D411	F-5	Q451	D-5
D412	F-5	Q452	E-5
D413	H-1	Q501	B-3
D501	C-3	Q502	F-3
D502	E-4	Q503	G-5
D503	G-5	Q504	F-5
D511	I-3	Q505	F-3
D512	I-4	Q506	D-3
D513	I-4	Q507	C-3
D514	I-5	Q508	D-3
D515	I-5	Q509	D-3
D516	B-1	Q510	C-3
D517	F-4	Q511	C-3
D518	B-4	Q512	C-3
D801	E-18	Q513	C-3
D821	D-21	Q514	D-3
D822	D-26	Q511	H-1
D823	C-28	Q517	D-4
D824	D-21	Q518	D-5
D851	E-19	Q703	D-9
D901	G-22	Q801	D-18
D902	G-22	Q802	C-28
D903	D-22	Q803	A-27
D904	B-22	Q804	D-26
D905	B-22	Q851	D-19
D906	B-21	Q901	D-23
D907	A-22	Q902	B-21
D908	B-21	Q903	E-23
D909	C-21	Q904	D-22
IC101	G-14		
IC102	G-12		
IC103	G-12		
IC104	G-11		
IC105	G-9		
IC106	I-8		
IC107	G-8		
IC108	H-10		
IC301	I-11		
IC302	I-11		
IC303	I-11		
IC401	C-4		
IC411	F-6		
IC412	G-2		
IC501	F-4		
IC502	D-4		
IC503	E-2		
IC701	B-8		
IC702	D-8		
IC801	H-19		
IC802	B-27		
IC901	C-22		

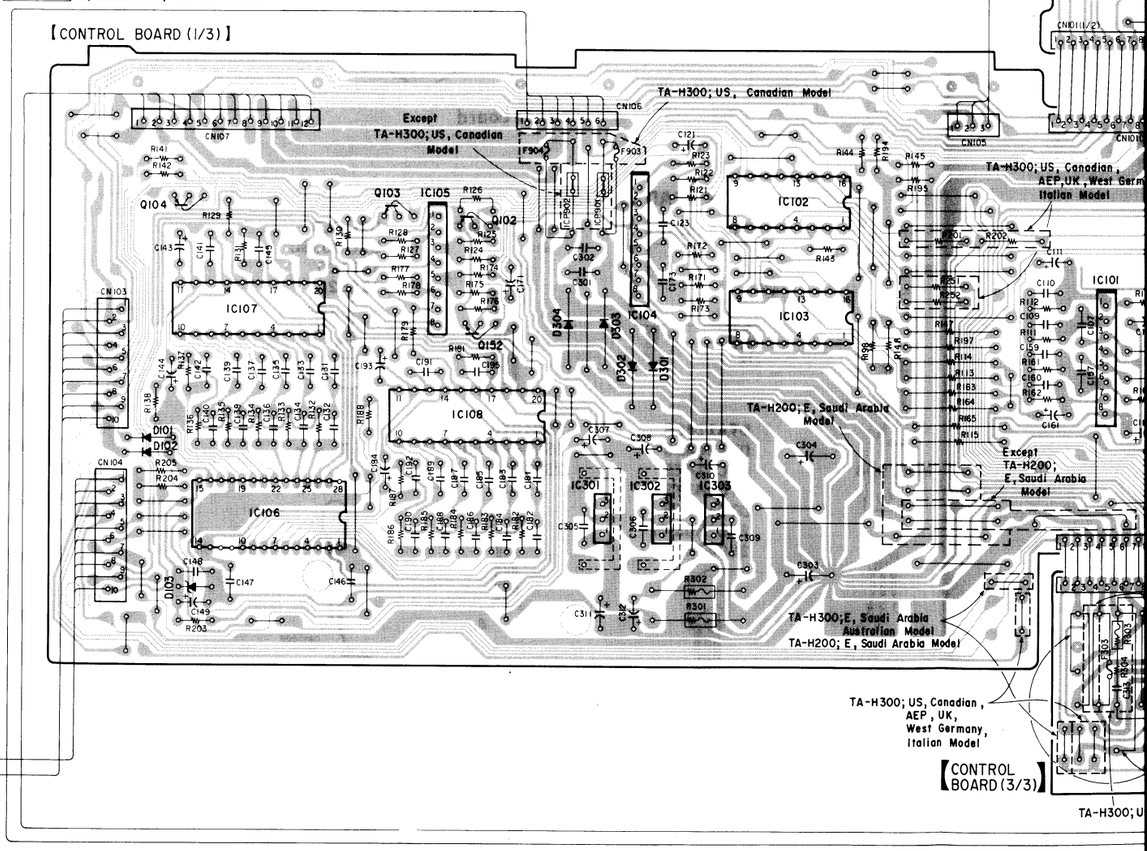
Note:

• ○—— : parts extracted from the component side.

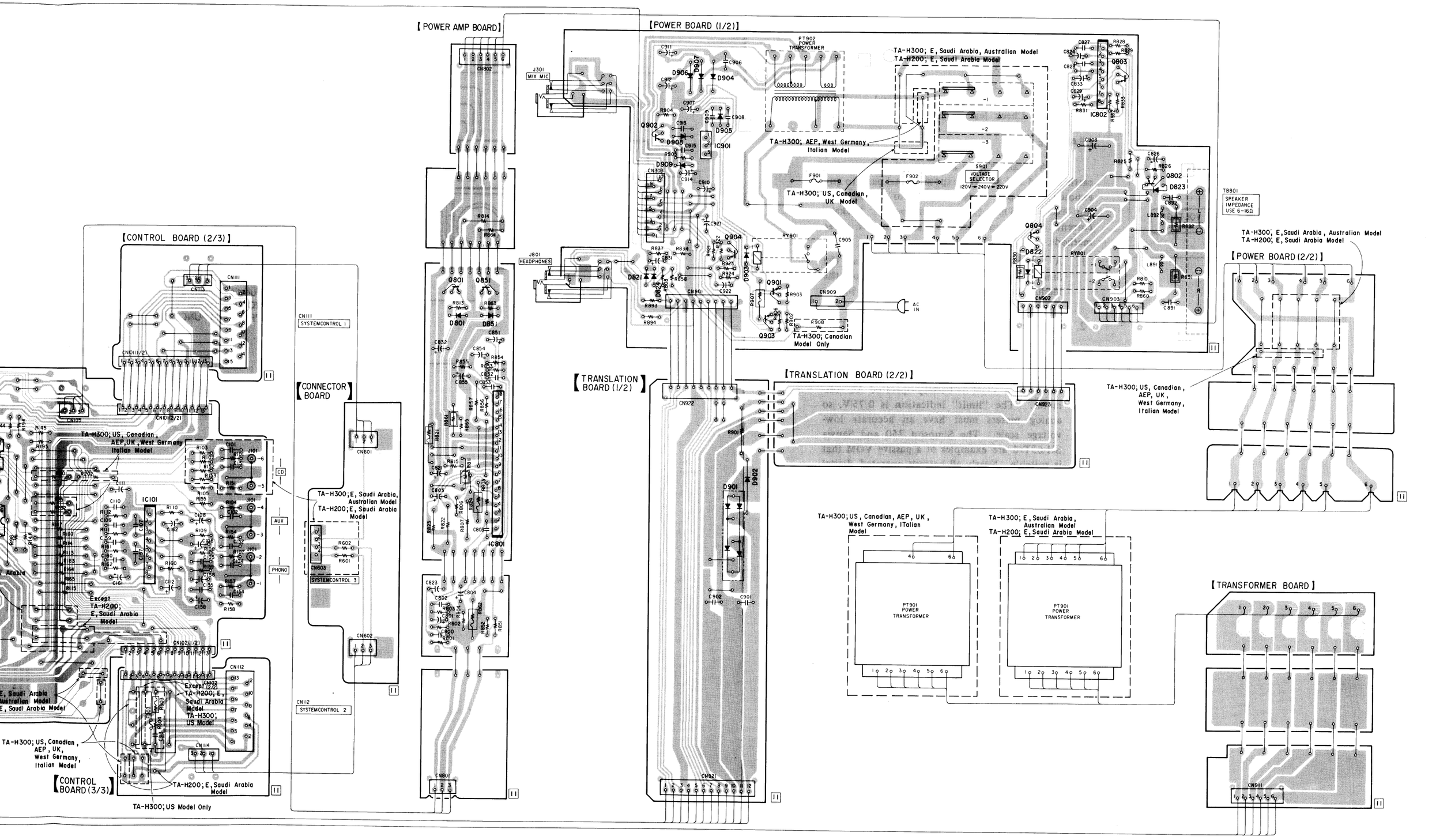
3-4. PRINTED WIRING BOARDS



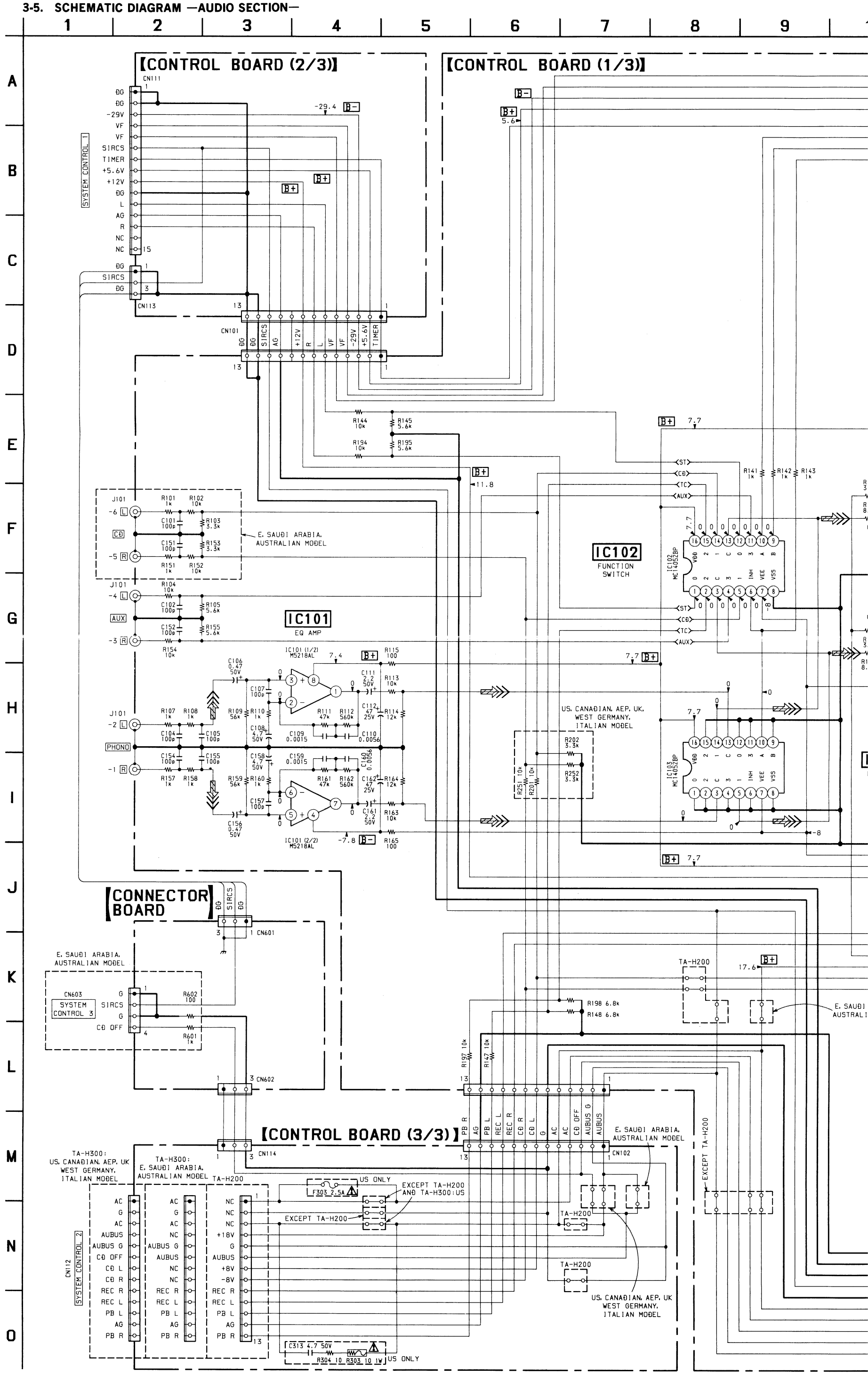

【VOLUME BOARD (1/2)】
【VOLUME BOARD (2/2)】
RV401
DBFB LEVEL :US, Canadian, AEP, UK, West Germany, Italian Model
SAT LEVEL :E, Saudi Arabia, Australian Model


【CONTROL BOARD (1/3)】
TA-H300; US, Canadian Model
Except TA-H300; US, Canadian Model
TA-H300; US, Canadian, AEP, UK, West Germany, Italian Model
TA-H200; E, Saudi Arabia Model
Except TA-H200; E, Saudi Arabia Model
TA-H300; E, Saudi Arabia Australian Model
TA-H200; E, Saudi Arabia Model
TA-H300; US, Canadian, AEP, UK, West Germany, Italian Model
【CONTROL BOARD (3/3)】

13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31



3-5. SCHEMATIC DIAGRAM —AUDIO SECTION—



TROL BOARD (1/3)]

B-
B+ 5.6

IC104
PRE AMP

IC105
LINE AMP

IC102
FUNCTION SWITCH

IC103
FUNCTION SWITCH

IC107
EQUALIZER AMP

IC106
EQUALIZER CONTROL

IC108
EQUALIZER AMP

IC303
REG

IC301
REG

IC302
REG

SURROUND ON:7.6 OFF:0

Q102, 152 SURROUND SWITCH

Q104 2SA1345 SURROUND SWITCHING

Q102 2SC3901

Q152 2SC3901

Q103 2SC3901 SWITCHING

IC104 (1/2) M5218AL

IC104 (2/2) M5218AL

IC105 (1/2) M5218AL

IC105 (2/2) M5218AL

IC107 M5229P

IC108 M5229P

IC106 LC7522

IC102 MC14052BP

IC103 MC14052BP

IC303 M5F7812

IC301 M5F7808

IC302 M5F7908

US, CANADIAN, AEP, UK, WEST GERMANY, ITALIAN MODEL

E, SAUDI ARABIA, AUSTRALIAN MODEL

EXCEPT TA-H200

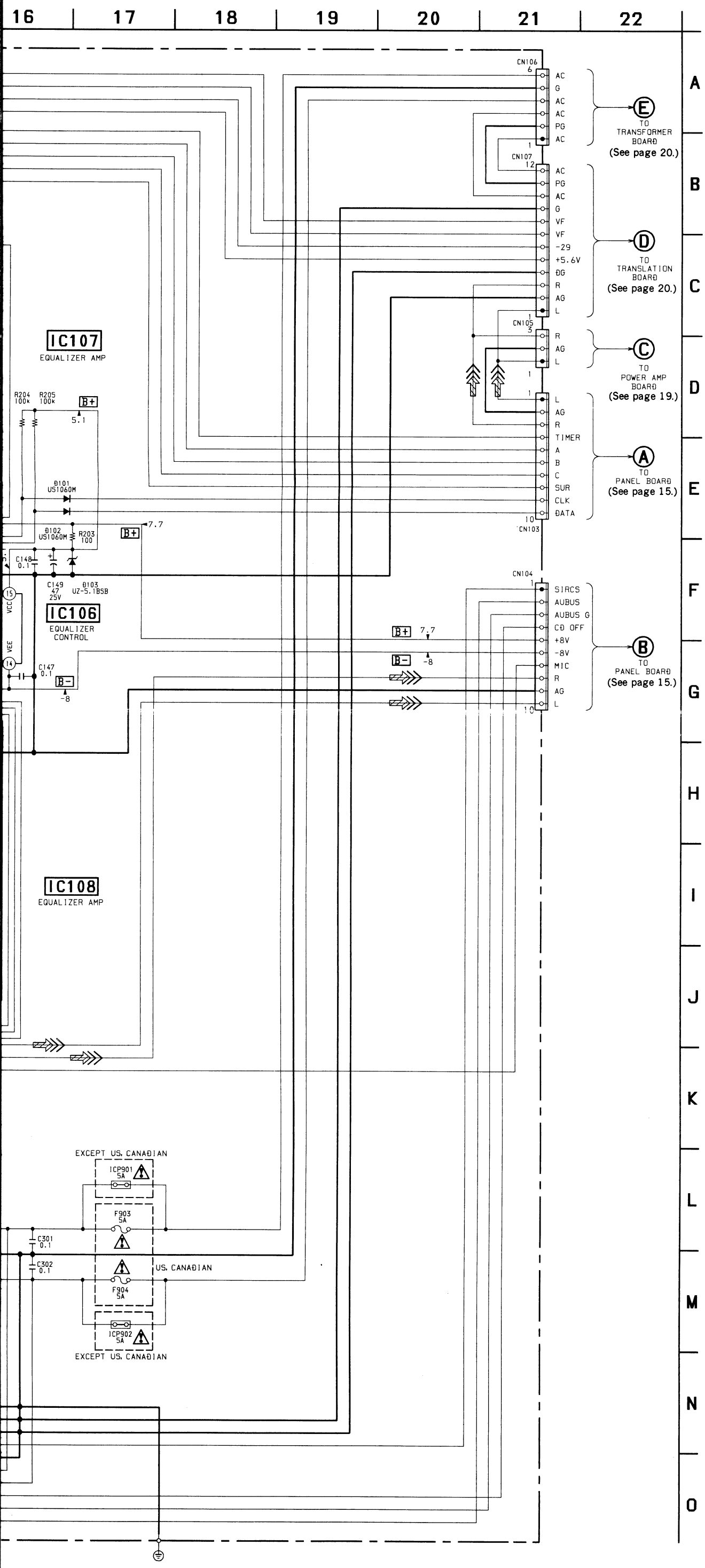
TA-H200

CN102

PB L
REC L
REC R
CD R
CD L
G
AC
AC
CD OFF
AUBUS G
AUBUS

EXCEPT US, CANADIAN

US

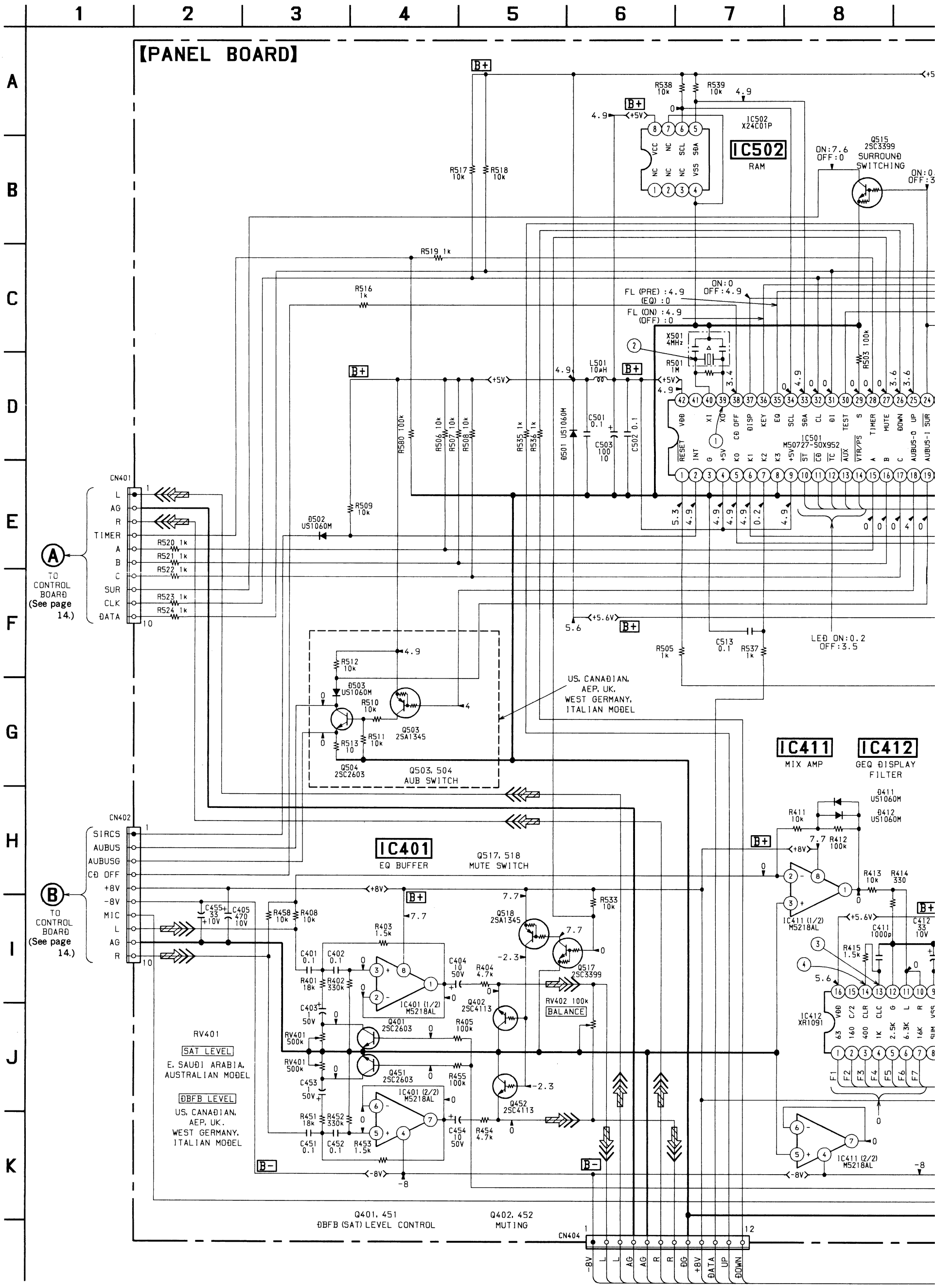


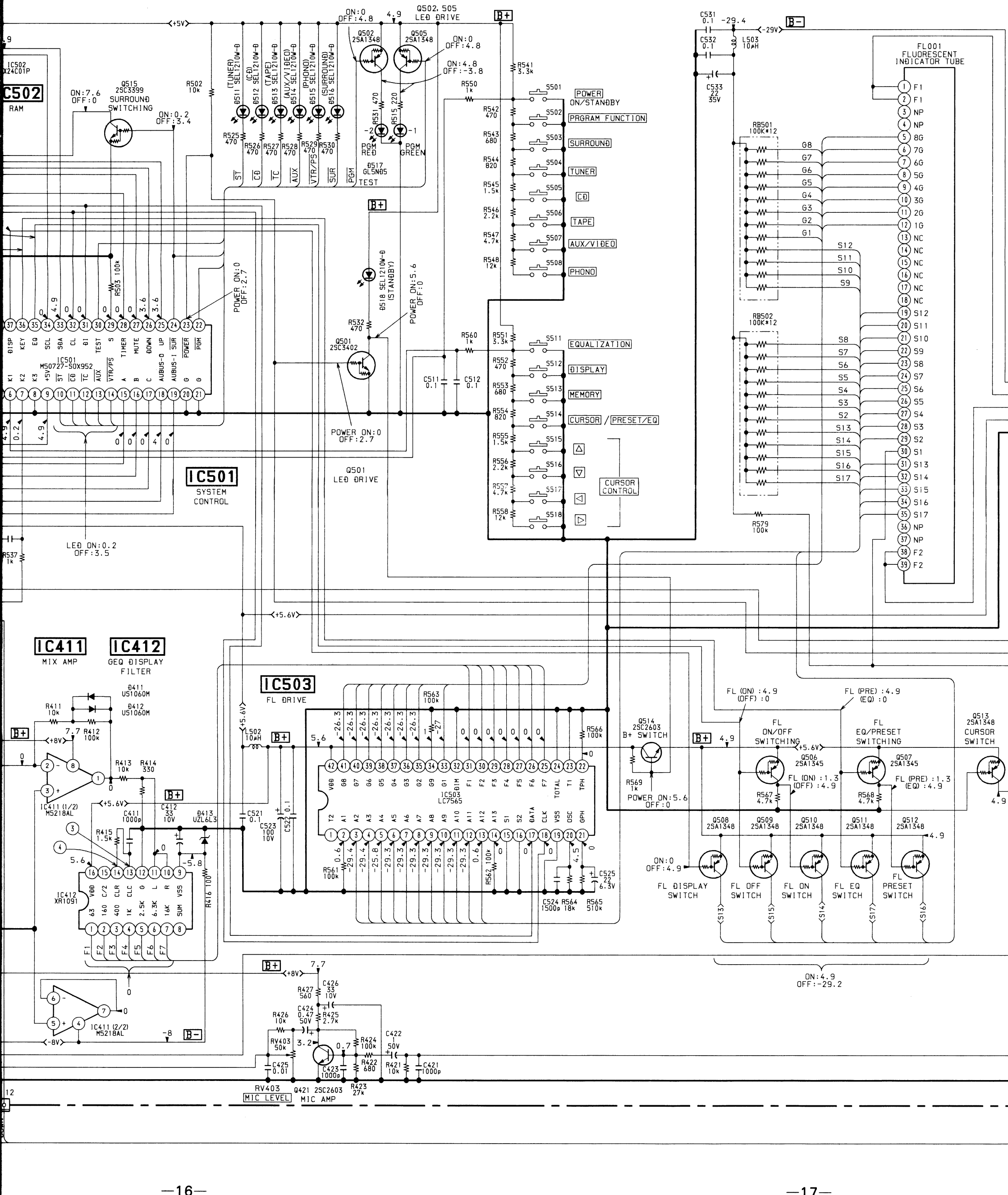
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- B+ : B+ Line
- B− : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  : PHONO

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3-6. SCHEMATIC DIAGRAM —CONTROL SECTION— • Refer to page 14 for notes.

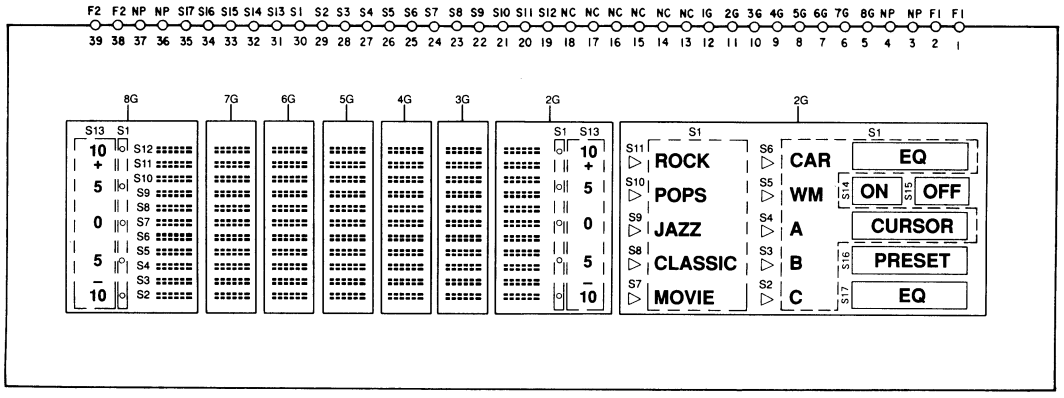



IC501
SYSTEM CONTROL
IC411
MIX AMP
IC412
GEQ DISPLAY FILTER
IC503
FL DRIVE
IC501 M50727-S0X952
IC411 (1/2) M5218AL
IC411 (2/2) M5218AL
IC412 XR1091
IC503 LC7565
Q501 LED DRIVE
Q502, 505 LED DRIVE
Q515 2SC3399 SURROUND SWITCHING
Q501 2SC3402
Q502 2SA1348
Q505 2SA1348
Q514 2SC2603 B+ SWITCH
Q506 2SA1345
Q507 2SA1345
Q513 2SA1348 CURSOR SWITCH
Q508 2SA1348
Q509 2SA1348
Q510 2SA1348
Q511 2SA1348
Q512 2SA1348
Q421 2SC2603 MIC AMP
FL001 FLUORESCENT INDICATOR TUBE
POWER ON/STANDBY
PRGRAM FUNCTION
SURROUND
TUNER
CD
TAPE
AUX/VIDEO
PHONO
EQUALIZATION
DISPLAY
MEMORY
CURSOR / PRESET/EQ
CURSOR CONTROL
MIC LEVEL
FL DISPLAY SWITCH
FL OFF SWITCH
FL ON SWITCH
FL EQ SWITCH
FL PRESET SWITCH
FL ON/OFF SWITCHING
FL EQ/PRESET SWITCHING
B+ SWITCH
LED ON:0.2 OFF:3.5
POWER ON:0 OFF:2.7
POWER ON:5.6 OFF:0
ON:4.9 OFF:-29.2
FL (ON) :4.9 (OFF) :0
FL (PRE) :4.9 (EQ) :0
FL (ON) :1.3 (OFF) :4.9
FL (PRE) :1.3 (EQ) :4.9
+5V
+5.6V
+8V
-8V
-29V
B+
B-

FL001
FLUORESCENT INDICATOR TUBE

1 F1
2 F1
3 NP
4 NP
5 8G
6 7G
7 6G
8 5G
9 4G
10 3G
11 2G
12 1G
13 NC
14 NC
15 NC
16 NC
17 NC
18 NC
19 S12
20 S11
21 S10
22 S9
23 S8
24 S7
25 S6
26 S5
27 S4
28 S3
29 S2
30 S1
31 S13
32 S14
33 S15
34 S16
35 S17
36 NP
37 NP
38 F2
39 F2

FL001


F2 F2 NP NP SI7 SI6 SI5 SI4 SI3 SI S2 S3 S4 S5 S6 S7 S8 S9 SI0 SI1 SI2 NC NC NC NC NC NC IG 2G 3G 4G 5G 6G 7G 8G NP NP FI FI
39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
8G 7G 6G 5G 4G 3G 2G 2G
S13 S1 S1 S13 S1 S1 S1
10 + 5 0 5 – 10
S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2
S11 S10 S9 S8 S7
ROCK POPS JAZZ CLASSIC MOVIE
S6 S5 S4 S3 S2
CAR WM A B C
EQ ON OFF CURSOR PRESET EQ
S14 S15 S16 S17

B– CN403 1 … 10

-29V
VF
VF
+5.6V
ĐG
RESET
POWER
ĐBFB
AG
MIC

Ⓕ TO POWER BOARĐ (See page 20.)

CN701 1 … 12
-8V L L AG AG R R ĐG +8 ĐATA UP ĐOWN

【VOLUME BOARD】

FL (PRE) :4.9
(EQ) :0

FL EQ/PRESET SWITCHING

Q507 2SA1345
FL (PRE) :1.3
(EQ) :4.9
R568 4.7k
Q511 2SA1348
Q512 2SA1348
4.9
EQ TCH
FL PRESET SWITCH
S17
S16

Q513 2SA1348 CURSOR SWITCH
4.9

R712 1k
R711 1k
B+ 5.5
VOL MOTOR
0.6 0.6
C705 10 50V
C704 10 50V
IC701 LB1639
VCC NC M M
UP GND NC DOWN
3.6 3.6
R701 10 1/4W 7.6
Q703 2SĐ1387-34
R709 10k
R710 10k
5.5
R713 1k
RV701 10k 15C
C701 100 10V
R707 680
R708 2.7k
C702 0.1
6
C703 100 10V
VOL LEĐ
Q703 B+ SWITCH

IC701
VOLUME MOTOR ĐRIVE

RV701 VOLUME

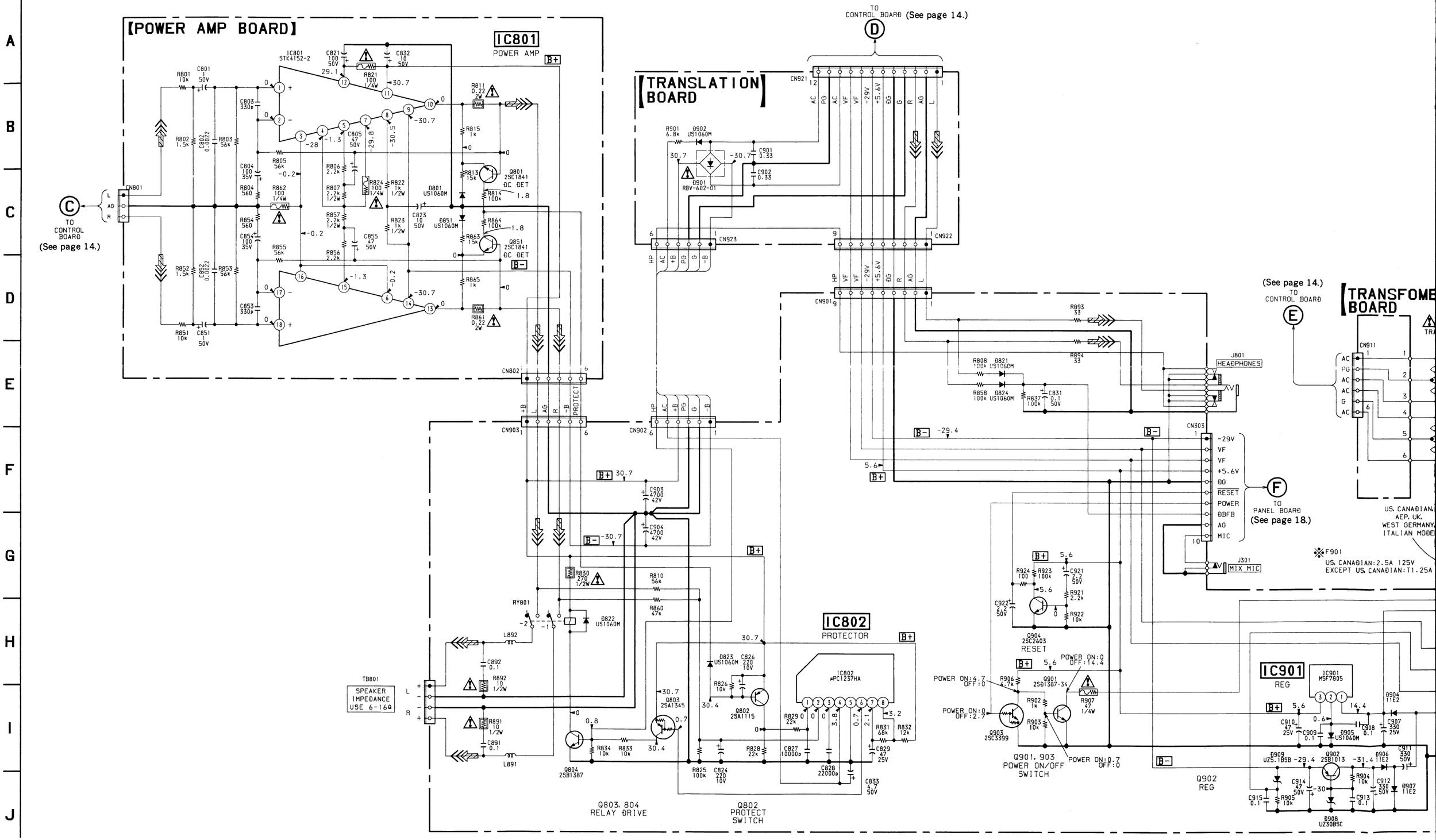
IC702
PRE AMP

R724 100
7.7
B+ 7.4 IC702 (1/2) M5218AL
C721 100 10V
C722 1 50V
RV701-2 100K 15A
C723 0.001
R721 10k
R723 100k
R722 12k
R773 100k
R772 12k
C773 0.001
R771 10k
RV701-3 100K 15A
C771 47 25V
C772 1 50V
-8
R774 100
B– -7.7 IC702 (2/2) M5218AL

• Waveforms

❶ 0.26μSEC 3.8VP-P
❷ 0.26μSEC 3.7VP-P
❸ 2.3μSEC 4VP-P
❹ 2.3μSEC 10.8VP-P

3-7. SCHEMATIC DIAGRAM —POWER SECTION— • Refer to page 14 for notes.



7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22

A B C D E F G H I J

TO CONTROL BOARD (See page 14.)

【TRANSLATION BOARD】

CN921 AC PG AC VF VF -29V +5.6V DG G R AG L

R901 6.8k D902 US1060M C901 0.33 C902 0.33 D901 RBV-602-01 30.7 -30.7

CN923 HP AC +B PG G -B

CN922 HP VF VF -29V +5.6V DG R AG L

CN901

R893 33 R894 33 R808 100k D821 US1060M R858 100k D824 US1060M R837 100k C831 0.1 50V

J801 HEADPHONES

CN902 HP AC +B PG G -B

B- -29.4 B+ 30.7 C903 4700 42V C904 4700 42V B- -30.7

CN303 -29V VF VF +5.6V DG RESET POWER DBFB AG MIC

F TO PANEL BOARD (See page 18.)

J301 MIX MIC

R830 270 1/2W R810 56k R860 47k D822 US1060M

IC802 PROTECTOR

D823 US1060M C826 220 10V R826 10k Q802 2SA1115 Q803 2SA1345

R829 22k R827 10000p R828 22k R825 100k C824 220 10V C828 22000p R831 68k R832 12k C829 47 25V C833 4.7 50V R834 10k R833 10k

Q803, 804 RELAY DRIVE

Q802 PROTECT SWITCH

B+ 5.6 R924 100 R923 100k C921 2.2 50V R921 2.2k C922 2.2 50V R922 10k Q904 2SC2603 RESET

POWER ON:4.7 OFF:0 R906 4.7k Q901 2SD1387-34 POWER ON:0 OFF:14.4 R907 47 1/4W

POWER ON:0 OFF:2.7 R902 1k R903 10k Q903 2SC3399

Q901, 903 POWER ON/OFF SWITCH

POWER ON:0.7 OFF:0

B- -29.4 5.6 B+

Q902 REG

IC901 REG IC901 M5F7805 D904 1IE2 C910 47 25V C909 0.1 D905 US1060M C908 0.1 C907 330 25V C906 0.1 C911 330 50V

D909 UZ5.1BSB -29.4 Q902 2SB1013 -31.4 D906 1IE2 R904 10k C914 47 50V -30 C912 330 50V D907 1IE2 C915 0.1 R905 10k C913 0.1 D908 UZ30BSC

(See page 14.) TO CONTROL BOARD (E)

【TRANSFOMER BOARD】

CN911 AC PG AC AC G AC

PT901 POWER TRANSFORMER

US, CANADIAN, AEP, UK, WEST GERMANY, ITALIAN MODEL

※F901 US, CANADIAN: 2.5A 125V EXCEPT US, CANADIAN: T1.25A

【POWER BOARD】

E, SAUDI ARABIA, AUSTRALIAN MODEL

F901 T1.25A F902 T1.25A S901-3 S901-2 220V 240V 120V S901 VOLTAGE SELECTOR

D903 US1060M RY901 C905 2200pF 400V CN909 AC IN

PT902 POWER TRANSFORMER

S901-1 220V 240V 120V

E, SAUDI ARABIA, AUSTRALIAN MODEL

AEP, WEST GERMANY, ITALIAN MODEL

US, CANADIAN, UK MODEL

R908 3.3M 1/2W CANADIAN MODEL ONLY

SECTION 4
EXPLODED VIEWS

NOTE:

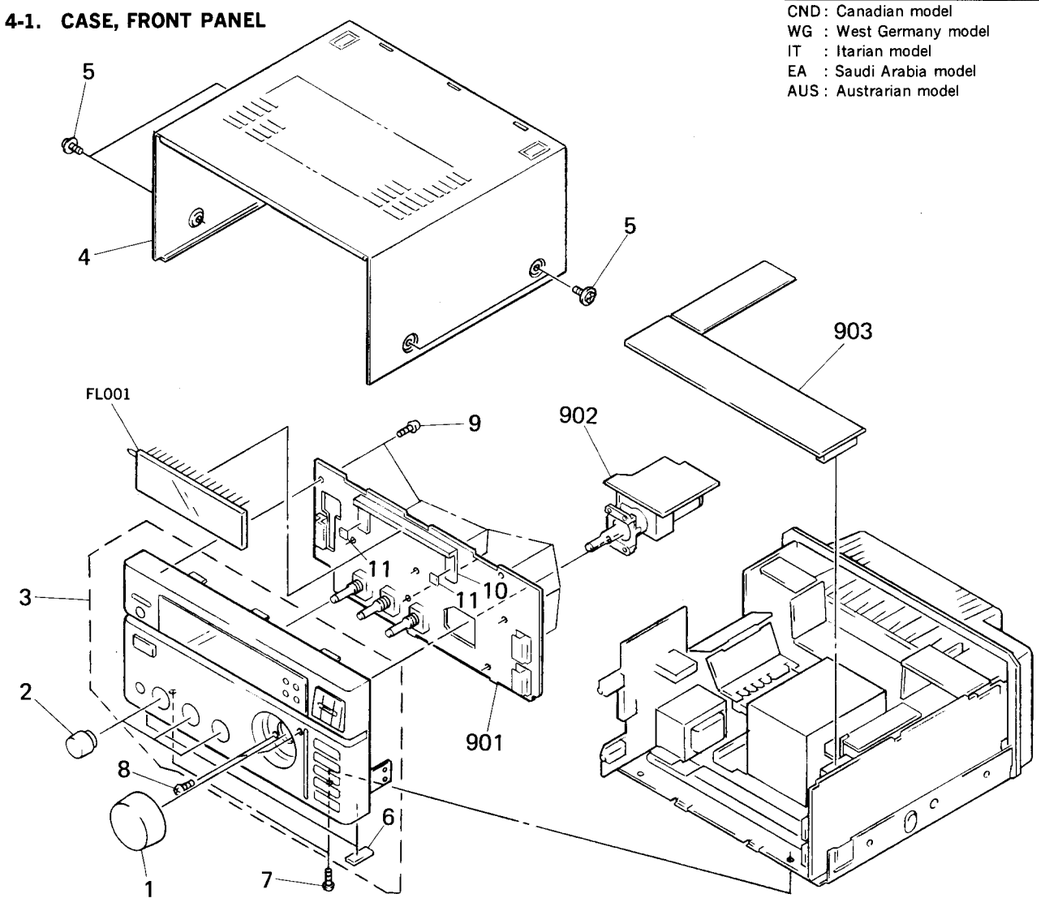
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

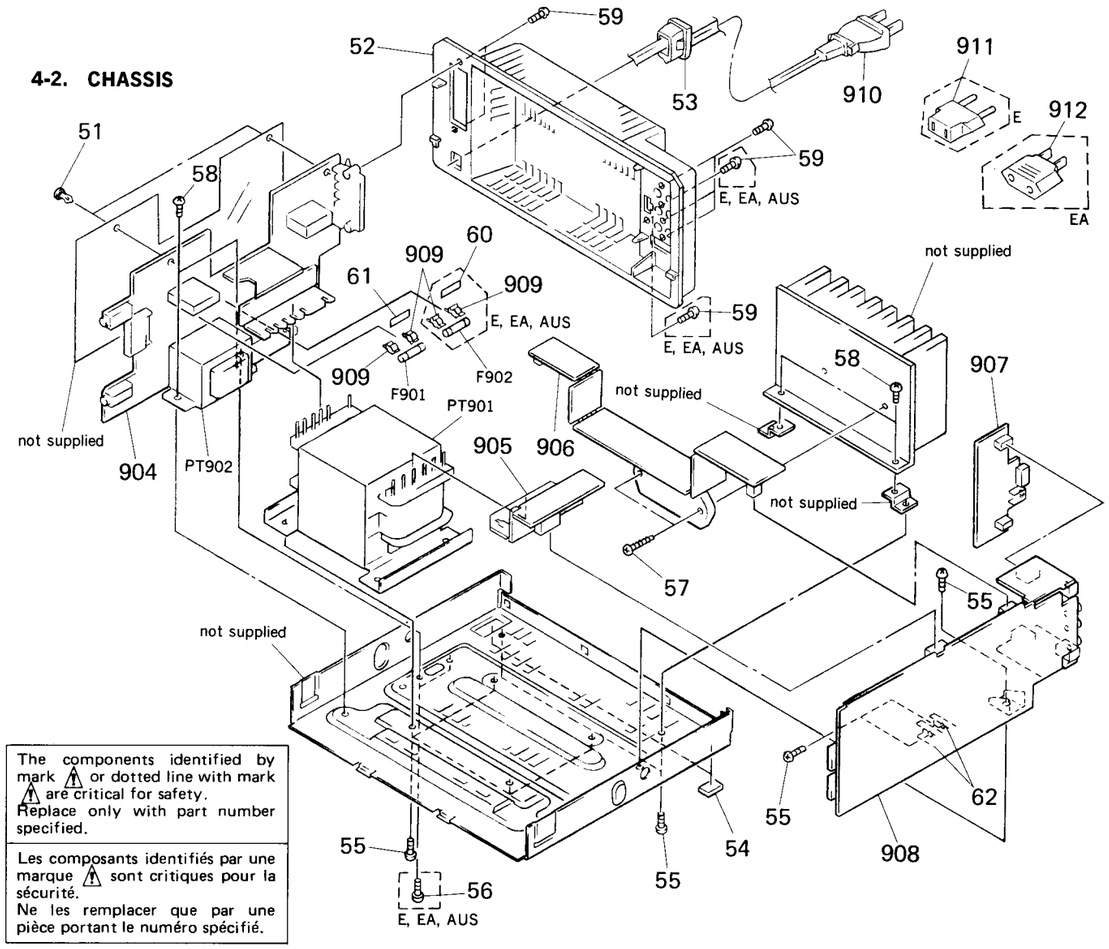
CND : Canadian model
WG : West Germany model
IT : Itarian model
EA : Saudi Arabia model
AUS : Austrarian model

4-1. CASE, FRONT PANEL



No.	Part No.	Description	Remarks
1	X-4936-803-1	KNOB (VOLUME) ASSY	
2	4-930-323-01	KNOB	
3	X-4930-317-1	(H300:US,CND,AEP,WG,UK,IT)...PANEL ASSY, FRONT	
	X-4930-318-2	(H200).....PANEL ASSY, FRONT	
	X-4930-319-2	(H300:AUS,E,EA)...PANEL ASSY, FRONT	
4	4-932-841-01	CASE	
5	3-704-366-01	SCREW (CASE) (M3X8)	
6	4-930-336-01	FOOT (FELT)	
7	7-685-870-01	SCREW +BVTT 3X5 (S)	
8	7-682-548-04	SCREW +BVTT 3X8 (S)	
9	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
10	*4-934-443-01	HOLDER (FL TUBE)	
11	*4-932-810-01	CUSHION (FL)	
901	*A-4334-639-A	(H300:US,CND,AEP,UK,AUS,E,EA)...MOUNTED PCB, PANEL	
	*A-4334-640-A	(H300:WG,IT).....MOUNTED PCB, PANEL	
	*A-4334-995-A	(H200).....MOUNTED PCB, PANEL	
902	*1-635-301-11	PC BOARD, VOLUME	
903	*1-635-304-11	PC BOARD, TRANSLATION	
FL001	1-519-607-11	INDICATOR TUBE, FLUORESCENT	

4-2. CHASSIS



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Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

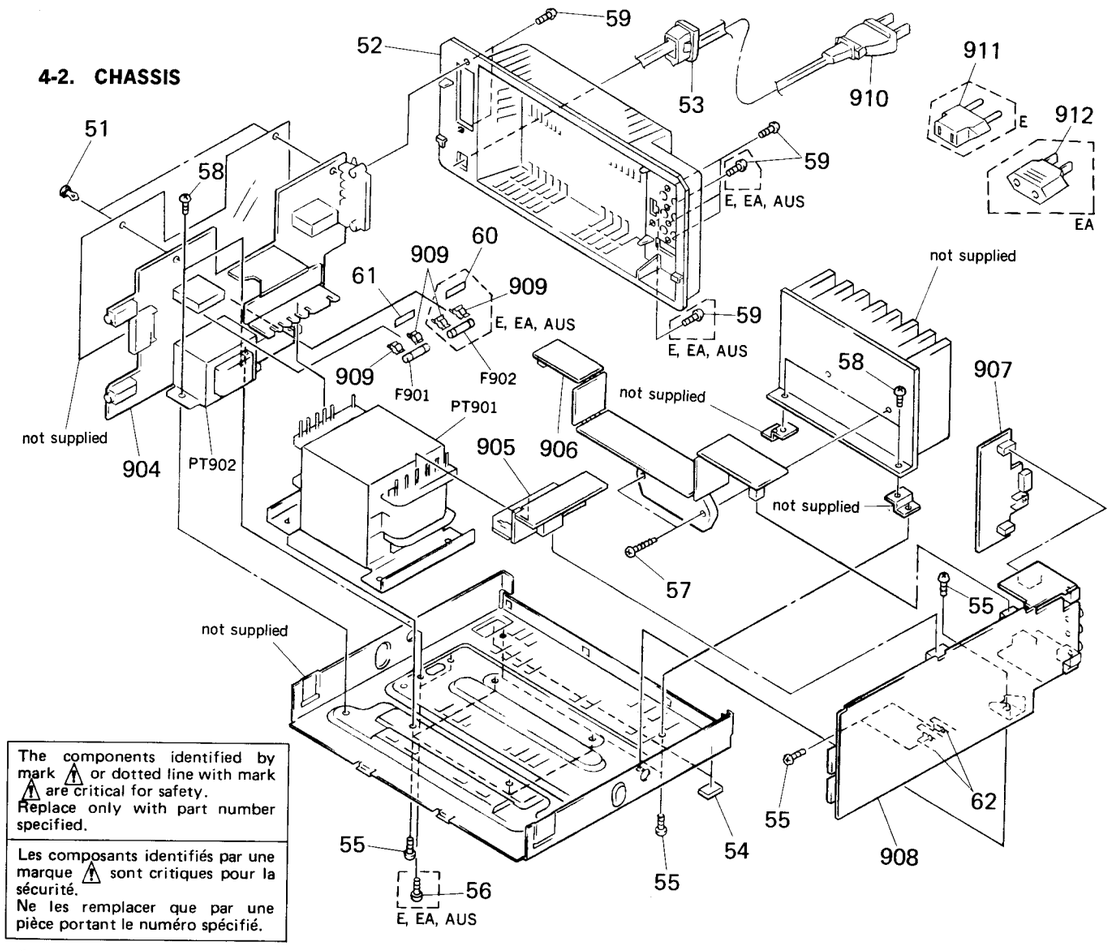
No.	Part No.	Description	Remarks
51	4-812-134-11	RIVET NYLON, 3.5	
52	*4-934-445-02	(AUS,E,EA).....PANEL, BACK	
	*4-934-445-11	(US,CND,AEP,WG,UK,IT)...PANEL, BACK	
53	*3-703-244-00	(EXCEPT E)...BUSHING (2104), CORD	
	*3-703-571-00	(E).....BUSHING (4516), CORD	
54	4-930-336-01	FOOT (FELT)	
55	7-682-547-04	SCREW +BVTT 3X6 (S)	
56	7-685-647-11	(AUS,E,EA)...SCREW +BVTT 3X10 TYPE2 N-S	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
58	7-682-548-04	SCREW +BVTT 3X8 (S)	
59	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
60	3-701-947-12	(EXCEPT US,CND)...LABEL (T1.25A), FUSE	
61	*3-701-946-23	(US,CND).....LABEL (2A125V), FUSE	
	*3-701-947-12	(E, EA, AUS).....LABEL (T1.25A), FUSE	
62	*3-309-144-21	HEAT SINK	
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER	
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER	
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER	
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER	
	*A-4334-645-A	(US).....MOUNTED PCB, POWER	
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER	
905	*1-635-303-11	PC BOARD, TRANSFORMER	
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP	
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP	
907	*1-635-302-11	PC BOARD, CONNECTOR	
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL	
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL	
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL	
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL	
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL	
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL	
909	1-533-213-31	HOLDER, FUSE	
910	⚠.1-574-804-11	(UK).....CORD, POWER	
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER	
	⚠.1-574-902-11	(E).....CORD, POWER	
	⚠.1-575-105-11	(US,CND).....CORD, POWER	
	⚠.1-575-677-11	(AUS).....CORD, POWER	
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P	
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P	
F901	⚠.1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG (1.25A)	
F901	⚠.1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)	
F902	⚠.1-532-502-51	(E,EA,AUS).....FUSE, TIME LAG (1.25A)	
PT901	⚠.1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER	
PT901	⚠.1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER	
PT901	⚠.1-450-001-11	(UK).....TRANSFORMER, POWER	
PT901	⚠.1-450-002-11	(US).....TRANSFORMER, POWER	
PT901	⚠.1-450-003-11	(CND).....TRANSFORMER, POWER	
PT902	⚠.1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER	
PT902	⚠.1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER	
PT902	⚠.1-450-043-11	(US,CND).....TRANSFORMER, POWER	

NOTE:

- Due to stand
  list may be
  the diagrams
- Items marke
  are seldom
  delay should
  items.
- If there are
  such as a s
  circuit parts
  resistors in o

Ref.No.	Part No
901	*A-4334-
	*A-4334-
	*A-4334-
902	*1-635-3
903	*1-635-3
904	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
905	*1-635-3
906	*A-4334-
	*A-4334-
907	*1-635-3
908	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
	*A-4334-
909	1-533-2
910	⚠.1-574-8
	⚠.1-574-8
	⚠.1-574-9
	⚠.1-575-1
	⚠.1-575-6
911	⚠.1-569-0
912	⚠.1-569-0
C101	1-162-2
C102	1-162-2
C104	1-162-2
C105	1-162-2
C106	1-124-9
C107	1-162-2
C108	1-124-9
C109	1-130-4
C110	1-130-4
C111	1-124-9
C112	1-124-4
C121	1-124-4
C123	1-162-2
C131	1-130-4
C132	1-130-4

4-2. CHASSIS



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No.	Part No.	Description	Remarks
51	4-812-134-11	RIVET NYLON, 3.5	
52	*4-934-445-02	(AUS,E,EA).....PANEL, BACK	
	*4-934-445-11	(US,CND,AEP,WG,UK,IT)...PANEL, BACK	
53	*3-703-244-00	(EXCEPT E)...BUSHING (2104), CORD	
	*3-703-571-00	(E).....BUSHING (4516), CORD	
54	4-930-336-01	FOOT (FELT)	
55	7-682-547-04	SCREW +BVTT 3X6 (S)	
56	7-685-647-11	(AUS,E,EA)...SCREW +BVTT 3X10 TYPE2 N-S	
57	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
58	7-682-548-04	SCREW +BVTT 3X8 (S)	
59	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
60	3-701-947-12	(EXCEPT US,CND)...LABEL (T1.25A), FUSE	
61	*3-701-946-23	(US,CND).....LABEL (2A125V), FUSE	
	*3-701-947-12	(E, EA, AUS).....LABEL (T1.25A), FUSE	
62	*3-309-144-21	HEAT SINK	
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER	
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER	
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER	
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER	
	*A-4334-645-A	(US).....MOUNTED PCB, POWER	
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER	
905	*1-635-303-11	PC BOARD, TRANSFORMER	
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP	
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP	
907	*1-635-302-11	PC BOARD, CONNECTOR	
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL	
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL	
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL	
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL	
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL	
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL	
909	1-533-213-31	HOLDER, FUSE	
910	⚠.1-574-804-11	(UK).....CORD, POWER	
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER	
	⚠.1-574-902-11	(E).....CORD, POWER	
	⚠.1-575-105-11	(US,CND).....CORD, POWER	
	⚠.1-575-677-11	(AUS).....CORD, POWER	
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P	
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P	
F901	⚠.1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG (1.25A)	
F901	⚠.1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)	
F902	⚠.1-532-502-51	(E,EA,AUS).....FUSE, TIME LAG (1.25A)	
PT901	⚠.1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER	
PT901	⚠.1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER	
PT901	⚠.1-450-001-11	(UK).....TRANSFORMER, POWER	
PT901	⚠.1-450-002-11	(US).....TRANSFORMER, POWER	
PT901	⚠.1-450-003-11	(CND).....TRANSFORMER, POWER	
PT902	⚠.1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER	
PT902	⚠.1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER	
PT902	⚠.1-450-043-11	(US,CND).....TRANSFORMER, POWER	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CND : Canadian model
WG : West Germany model
IT : Itarian model
EA : Saudi Aradia model
AUS : Austrarian model

Ref.No.	Part No.	Description
901	*A-4334-639-A	(H300:US,CND,AEP,UK,AUS,E,EA) ...MOUNTED PCB, PANEL
	*A-4334-640-A	(H300:WG,IT).....MOUNTED PCB, PANEL
	*A-4334-995-A	(H200).....MOUNTED PCB, PANEL
902	*1-635-301-11	PC BOARD, VOLUME
903	*1-635-304-11	PC BOARD, TRANSLATION
904	*A-4334-641-A	(AUS,E,EA)...MOUNTED PCB, POWER
	*A-4334-642-A	(AEP).....MOUNTED PCB, POWER
	*A-4334-643-A	(UK).....MOUNTED PCB, POWER
	*A-4334-644-A	(WG,IT).....MOUNTED PCB, POWER
	*A-4334-645-A	(US).....MOUNTED PCB, POWER
	*A-4334-994-A	(CND).....MOUNTED PCB, POWER
905	*1-635-303-11	PC BOARD, TRANSFORMER
906	*A-4334-646-A	(EXCEPT WG,IT)...MOUNTED PCB, POWER AMP
	*A-4334-647-A	(WG,IT).....MOUNTED PCB, POWER AMP
907	*1-635-302-11	PC BOARD, CONNECTOR
908	*A-4334-635-A	(H300:E,EA,AUS)...MOUNTED PCB, CONTROL
	*A-4334-636-A	(H300:WG,IT).....MOUNTED PCB, CONTROL
	*A-4334-637-A	(H300:US).....MOUNTED PCB, CONTROL
	*A-4334-638-A	(H300:CND).....MOUNTED PCB, CONTROL
	*A-4334-903-A	(H300:AEP,UK).....MOUNTED PCB, CONTROL
	*A-4334-662-A	(H200).....MOUNTED PCB, CONTROL
909	1-533-213-31	HOLDER, FUSE
910	⚠.1-574-804-11	(UK).....CORD, POWER
	⚠.1-574-805-11	(AEP,WG,IT,EA)...CORD, POWER
	⚠.1-574-902-11	(E).....CORD, POWER
	⚠.1-575-105-11	(US,CND).....CORD, POWER
	⚠.1-575-677-11	(AUS).....CORD, POWER
911	⚠.1-569-007-11	(E)....ADAPTOR, CONVERSION 2P
912	⚠.1-569-008-11	(EA)...ADAPTOR, CONVERSION 2P
C101	1-162-282-31	(E,EA,AUS)...CERAMIC 100PF 10% 50V
C102	1-162-282-31	CERAMIC 100PF 10% 50V
C104	1-162-282-31	CERAMIC 100PF 10% 50V
C105	1-162-282-31	CERAMIC 100PF 10% 50V
C106	1-124-902-00	ELECT 0.47MF 20% 50V
C107	1-162-282-31	CERAMIC 100PF 10% 50V
C108	1-124-927-11	ELECT 4.7MF 20% 50V
C109	1-130-473-00	MYLAR 0.0015MF 5% 50V
C110	1-130-480-00	MYLAR 0.0056MF 5% 50V
C111	1-124-925-11	ELECT 2.2MF 20% 50V
C112	1-124-477-11	ELECT 47MF 20% 25V
C121	1-124-477-11	ELECT 47MF 20% 25V
C123	1-162-282-31	CERAMIC 100PF 10% 50V
C131	1-130-474-00	MYLAR 0.0018MF 5% 50V
C132	1-130-474-00	MYLAR 0.0018MF 5% 50V
C133	1-130-479-00	MYLAR 0.0047MF 5% 50V
C134	1-130-479-00	MYLAR 0.0047MF 5% 50V
C135	1-136-154-00	FILM 0.012MF 5% 50V
C136	1-136-154-00	FILM 0.012MF 5% 50V
C137	1-136-158-00	FILM 0.027MF 5% 50V
C138	1-136-158-00	FILM 0.027MF 5% 50V
C139	1-136-163-00	FILM 0.068MF 5% 50V
C140	1-136-163-00	FILM 0.068MF 5% 50V
C141	1-136-168-00	FILM 0.18MF 5% 50V
C142	1-136-168-00	FILM 0.18MF 5% 50V
C143	1-124-902-00	ELECT 0.47MF 20% 50V
C144	1-124-902-00	ELECT 0.47MF 20% 50V
C145	1-130-467-00	MYLAR 470PF 5% 50V
C146	1-164-159-11	CERAMIC 0.1MF 50V
C147	1-164-159-11	CERAMIC 0.1MF 50V
C148	1-164-159-11	CERAMIC 0.1MF 50V
C149	1-124-477-11	ELECT 47MF 20% 25V
C151	1-162-282-31	(E,EA,AUS)...CERAMIC 100PF 10% 50V
C152	1-162-282-31	CERAMIC 100PF 10% 50V
C154	1-162-282-31	CERAMIC 100PF 10% 50V
C155	1-162-282-31	CERAMIC 100PF 10% 50V
C156	1-124-902-00	ELECT 0.47MF 20% 50V
C157	1-162-282-31	CERAMIC 100PF 10% 50V
C158	1-124-927-11	ELECT 4.7MF 20% 50V
C159	1-130-473-00	MYLAR 0.0015MF 5% 50V
C160	1-130-480-00	MYLAR 0.0056MF 5% 50V
C161	1-124-925-11	ELECT 2.2MF 20% 50V
C162	1-124-477-11	ELECT 47MF 20% 25V
C171	1-124-477-11	ELECT 47MF 20% 25V
C173	1-162-282-31	CERAMIC 100PF 10% 50V
C181	1-130-474-00	MYLAR 0.0018MF 5% 50V
C182	1-130-474-00	MYLAR 0.0018MF 5% 50V
C183	1-130-479-00	MYLAR 0.0047MF 5% 50V
C184	1-130-479-00	MYLAR 0.0047MF 5% 50V
C185	1-136-154-00	FILM 0.012MF 5% 50V
C186	1-136-154-00	FILM 0.012MF 5% 50V
C187	1-136-158-00	FILM 0.027MF 5% 50V
C188	1-136-158-00	FILM 0.027MF 5% 50V
C189	1-136-163-00	FILM 0.068MF 5% 50V
C190	1-136-163-00	FILM 0.068MF 5% 50V
C191	1-136-168-00	FILM 0.18MF 5% 50V
C192	1-136-168-00	FILM 0.18MF 5% 50V
C193	1-124-902-00	ELECT 0.47MF 20% 50V
C194	1-124-902-00	ELECT 0.47MF 20% 50V
C195	1-130-467-00	MYLAR 470PF 5% 50V

Ref.No.	Part No.	Description			
C301	1-136-165-00	FILM	0.1MF	5%	50V
C302	1-136-165-00	FILM	0.1MF	5%	50V
C303	1-124-563-11	ELECT	2200MF	20%	25V
C304	1-124-563-11	ELECT	2200MF	20%	25V
C305	1-164-159-11	CERAMIC	0.1MF		50V
C306	1-164-159-11	CERAMIC	0.1MF		50V
C307	1-124-477-11	ELECT	47MF	20%	25V
C308	1-124-477-11	ELECT	47MF	20%	25V
C309	1-164-159-11	CERAMIC	0.1MF		50V
C310	1-124-477-11	ELECT	47MF	20%	25V
C311	1-124-477-11	ELECT	47MF	20%	25V
C312	1-124-477-11	ELECT	47MF	20%	25V
C313	1-124-768-11	(US)...ELECT	4.7MF	20%	50V
C401	1-136-165-00	FILM	0.1MF	5%	50V
C402	1-136-165-00	FILM	0.1MF	5%	50V
C403	1-126-160-11	ELECT	1MF	20%	50V
C404	1-124-261-00	ELECT	10MF	20%	50V
C405	1-124-472-11	ELECT	470MF	20%	10V
C411	1-162-294-31	CERAMIC	0.001MF	10%	50V
C412	1-124-229-00	ELECT	33MF	20%	10V
C421	1-162-294-31	CERAMIC	0.001MF	10%	50V
C422	1-126-160-11	ELECT	1MF	20%	50V
C423	1-162-294-31	CERAMIC	0.001MF	10%	50V
C424	1-124-465-00	ELECT	0.47MF	20%	50V
C425	1-161-379-00	CERAMIC	0.01MF	30%	16V
C426	1-124-229-00	ELECT	33MF	20%	10V
C451	1-136-165-00	FILM	0.1MF	5%	50V
C452	1-136-165-00	FILM	0.1MF	5%	50V
C453	1-126-160-11	ELECT	1MF	20%	50V
C454	1-124-261-00	ELECT	10MF	20%	50V
C455	1-124-229-00	ELECT	33MF	20%	10V
C501	1-164-159-11	CERAMIC	0.1MF		50V
C502	1-164-159-11	CERAMIC	0.1MF		50V
C503	1-124-584-00	ELECT	100MF	20%	10V
C511	1-164-159-11	CERAMIC	0.1MF		50V
C512	1-164-159-11	CERAMIC	0.1MF		50V
C513	1-164-159-11	CERAMIC	0.1MF		50V
C521	1-164-159-11	CERAMIC	0.1MF		50V
C522	1-164-159-11	CERAMIC	0.1MF		50V
C523	1-124-584-00	ELECT	100MF	20%	10V
C524	1-161-374-11	CERAMIC	0.0015MF	30%	16V
C525	1-126-153-11	ELECT	22MF	20%	6.3V
C531	1-164-159-11	CERAMIC	0.1MF		50V
C532	1-164-159-11	CERAMIC	0.1MF		50V
C533	1-124-248-00	ELECT	22MF	20%	35V
C701	1-124-443-00	ELECT	100MF	20%	10V
C702	1-164-159-11	CERAMIC	0.1MF		50V
C703	1-124-443-00	ELECT	100MF	20%	10V
C704	1-123-875-11	ELECT	10MF	20%	50V
C705	1-123-875-11	ELECT	10MF	20%	50V
C721	1-124-443-00	ELECT	100MF	20%	10V
C722	1-124-791-11	ELECT	1MF	20%	50V
C723	1-130-471-00	MYLAR	0.001MF	5%	50V
C771	1-124-477-11	ELECT	47MF	20%	25V
C772	1-124-791-11	ELECT	1MF	20%	50V
C773	1-130-471-00	MYLAR	0.001MF	5%	50V
C801	1-124-791-11	ELECT	1MF	20%	50V

Ref.No.	Part No.	Description			
C802	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C803	1-162-288-31	CERAMIC	330PF	10%	50V
C804	1-124-122-11	ELECT	100MF	20%	35V
C805	1-124-910-11	ELECT	47MF	20%	50V
C821	1-124-122-11	ELECT	100MF	20%	50V
C823	1-123-875-11	ELECT	10MF	20%	50V
C824	1-126-176-11	ELECT	220MF	20%	10V
C826	1-126-176-11	ELECT	220MF	20%	10V
C827	1-161-379-00	CERAMIC	0.01MF	30%	16V
C828	1-161-494-00	CERAMIC	0.022MF		25V
C829	1-124-477-11	ELECT	47MF	20%	25V
C831	1-124-463-00	ELECT	0.1MF	20%	50V
C832	1-123-875-11	ELECT	10MF	20%	50V
C833	1-124-927-11	ELECT	4.7MF	20%	50V
C851	1-124-791-11	ELECT	1MF	20%	50V
C852	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C853	1-162-288-31	CERAMIC	330PF	10%	50V
C854	1-124-122-11	ELECT	100MF	20%	35V
C855	1-124-910-11	ELECT	47MF	20%	50V
C891	1-136-165-00	FILM	0.1MF	5%	50V
C892	1-136-165-00	FILM	0.1MF	5%	50V
C901	1-136-171-00	FILM	0.33MF	5%	50V
C902	1-136-171-00	FILM	0.33MF	5%	50V
C903	1-126-224-11	ELECT	4700MF	20%	42V
C904	1-126-224-11	ELECT	4700MF	20%	42V
C905 ⚠	1-161-742-00	CERAMIC	0.0022MF	20%	400V
C906	1-136-165-00	FILM	0.1MF	5%	50V
C907	1-124-479-11	ELECT	330MF	20%	25V
C908	1-164-159-11	CERAMIC	0.1MF		50V
C909	1-164-159-11	CERAMIC	0.1MF		50V
C910	1-124-477-11	ELECT	47MF	20%	25V
C911	1-124-912-11	ELECT	330MF	20%	50V
C912	1-124-912-11	ELECT	330MF	20%	50V
C913	1-164-159-11	CERAMIC	0.1MF		50V
C914	1-124-910-11	ELECT	47MF	20%	50V
C915	1-164-159-11	CERAMIC	0.1MF		50V
C921	1-124-925-11	ELECT	2.2MF	20%	50V
C922	1-124-925-11	ELECT	2.2MF	20%	50V

CN101	1-506-979-31	CONNECTOR, BOARD TO BOARD 13P
CN102	1-506-979-31	CONNECTOR, BOARD TO BOARD 13P
CN103	1-568-321-11	SOCKET, CONNECTOR 10P
CN104	1-568-321-11	SOCKET, CONNECTOR 10P
CN105	*1-569-499-11	PIN, CONNECTOR 3P
CN106	*1-569-501-11	PIN, CONNECTOR 6P
CN107	*1-569-507-11	PIN, CONNECTOR 12P
CN111	*1-566-859-11	SOCKET, CONNECTOR 15P(SYSTEM CONTROL 1)
CN112	*1-565-291-11	SOCKET, CONNECTOR 13P(SYSTEM CONTROL 2)
CN303	1-568-321-11	SOCKET, CONNECTOR 10P
CN401	*1-568-322-11	PLUG, CONNECTOR 10P
CN402	*1-568-322-11	PLUG, CONNECTOR 10P
CN403	*1-568-322-11	PLUG, CONNECTOR 10P
CN404	*1-561-652-00	SOCKET, CONNECTOR 12P
CN601	1-569-490-11	SOCKET, CONNECTOR 3P
CN602	1-569-490-11	SOCKET, CONNECTOR 3P
CN603	1-564-980-11	(E,EA,AUS)...PIN CONNECTOR 4P (SYSTEM CONTROL 3)
CN701	*1-560-443-11	PIN, CONNECTOR 12P

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
CN801	1-569-490-11	SOCKET, CONNECTOR 3P
CN802	1-569-492-11	SOCKET, CONNECTOR 6P
CN901	*1-569-504-11	PIN, CONNECTOR 9P
CN902	*1-569-501-11	PIN, CONNECTOR 6P
CN903	*1-569-501-11	PIN, CONNECTOR 6P
CN909	*1-564-321-00	PIN, CONNECTOR 2P
CN911	1-569-492-11	SOCKET, CONNECTOR 6P
CN921	*1-569-498-11	SOCKET, CONNECTOR 12P
CN922	*1-569-495-11	SOCKET, CONNECTOR 9P
CN923	1-569-492-11	SOCKET, CONNECTOR 6P
D101	8-719-912-20	DIODE 1SS120
D102	8-719-912-20	DIODE 1SS120
D103	8-719-010-38	DIODE UZ-5.1BSB
D301	8-719-200-82	DIODE 11ES2
D302	8-719-200-82	DIODE 11ES2
D303	8-719-200-82	DIODE 11ES2
D304	8-719-200-82	DIODE 11ES2
D411	8-719-912-20	DIODE 1SS120
D412	8-719-912-20	DIODE 1SS120
D413	8-719-000-54	DIODE UZL-6L3
D501	8-719-912-20	DIODE 1SS120
D502	8-719-912-20	DIODE 1SS120
D503	8-719-912-20	(US,CND,AEP,UK,WG,IT)...DIODE 1SS120
D511	8-719-303-13	DIODE SEL1210W
D512	8-719-303-13	DIODE SEL1210W
D513	8-719-303-13	DIODE SEL1210W
D514	8-719-303-13	DIODE SEL1210W
D515	8-719-303-13	DIODE SEL1210W
D516	8-719-303-13	DIODE SEL1210W
D517	8-719-920-55	DIODE SPR-54MVW
D518	8-719-303-13	DIODE SEL1210W
D801	8-719-912-20	DIODE 1SS120
D821	8-719-912-20	DIODE 1SS120
D822	8-719-912-20	DIODE 1SS120
D823	8-719-912-20	DIODE 1SS120
D824	8-719-912-20	DIODE 1SS120
D851	8-719-912-20	DIODE 1SS120
D901	8-719-302-38	DIODE RBV-602-01
D902	8-719-912-20	DIODE 1SS120
D903	8-719-912-20	DIODE 1SS120
D904	8-719-200-82	DIODE 11ES2
D905	8-719-912-20	DIODE 1SS120
D906	8-719-200-82	DIODE 11ES2
D907	8-719-200-82	DIODE 11ES2
D908	8-719-011-13	DIODE UZ-30BSC
D909	8-719-010-38	DIODE UZ-5.1BSB
F303 ⚠	1-532-780-21	(US)...FUSE, MICRO (SECONDARY)(2.5A)
F901 ⚠	1-532-502-51	(EXCEPT US,CND)...FUSE, TIME LAG(1.25A)
F901 ⚠	1-532-744-11	(US,CND).....FUSE, GLASS TUBE (2.5A)
F902 ⚠	1-532-502-51	(E,EA,AUS)...FUSE, TIME LAG (1.25A)
F903	1-532-783-21	(US,CND)...FUSE, MICRO (SECONDARY)(5A)
F904	1-532-783-21	(US,CND)...FUSE, MICRO (SECONDARY)(5A)
FL001	1-519-607-11	INDICATOR TUBE, FLUORESCENT
IC101	8-759-634-50	IC M5218AL
IC102	8-759-208-08	IC TC4052BPHB
IC103	8-759-208-08	IC TC4052BPHB
IC104	8-759-634-50	IC M5218AL
IC105	8-759-634-50	IC M5218AL
IC106	8-759-804-49	IC LC7522
IC107	8-759-603-14	IC M5229P
IC108	8-759-603-14	IC M5229P
IC301	8-759-604-30	IC M5F7808
IC302	8-759-604-48	IC M5F7908
IC303	8-759-604-33	IC M5F7812
IC401	8-759-634-50	IC M5218AL
IC411	8-759-634-50	IC M5218AL
IC412	8-759-991-11	IC XR1091
IC501	8-759-634-76	IC M50727-183SP
IC502	8-759-500-31	IC X24C01P
IC503	8-759-820-59	IC LC7565
IC701	8-759-820-62	IC LB1639
IC702	8-759-634-50	IC M5218AL
IC801	8-749-941-52	IC STK4152II
IC802	8-759-111-68	IC UPC1237HA
IC901	8-759-604-29	IC M5F7805L
⚠ICP901	1-532-846-21	(EXCEPT US,CND)...LINK, IC 5A
⚠ICP902	1-532-846-21	(EXCEPT US,CND)...LINK, IC 5A
J101	1-565-258-11	(US,CND,AEP,UK,WG,IT)...JACK, PIN 4P (AUX/PHONO)
J101	1-565-320-11	(E,EA,AUS)...JACK, PIN 6P(AUX/CD/PHONO)
J301	1-562-837-21	JACK (MIX MIC)
J801	1-562-837-21	JACK (HEADPHONES)
L501	1-410-509-11	INDUCTOR 10UH
L502	1-410-509-11	INDUCTOR 10UH
L503	1-410-509-11	INDUCTOR 10UH
L891	*1-420-872-00	COIL, AIR CORE
L892	*1-420-872-00	COIL, AIR CORE
PT901⚠	1-449-998-11	(E,EA,AUS)....TRANSFORMER, POWER
PT901⚠	1-449-999-11	(AEP,WG,IT)...TRANSFORMER, POWER
PT901⚠	1-450-001-11	(UK).....TRANSFORMER, POWER
PT901⚠	1-450-002-11	(US).....TRANSFORMER, POWER
PT901⚠	1-450-003-11	(CND).....TRANSFORMER, POWER
PT902⚠	1-450-041-11	(E,EA,AUS).....TRANSFORMER, POWER
PT902⚠	1-450-042-11	(AEP,UK,WG,IT)...TRANSFORMER, POWER
PT902⚠	1-450-043-11	(US,CND).....TRANSFORMER, POWER
Q102	8-729-900-74	TRANSISTOR DTC143TS
Q103	8-729-900-74	TRANSISTOR DTC143TS
Q104	8-729-900-65	TRANSISTOR DTA144ES
Q152	8-729-900-74	TRANSISTOR DTC143TS
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF
Q402	8-729-809-07	TRANSISTOR 2SC4113
Q421	8-729-620-05	TRANSISTOR 2SC2603-EF
Q451	8-729-620-05	TRANSISTOR 2SC2603-EF
Q452	8-729-809-07	TRANSISTOR 2SC4113
Q501	8-729-900-80	TRANSISTOR DTC114ES
Q502	8-729-900-61	TRANSISTOR DTA114ES
Q503	8-729-900-65	(US,CND,AEP,UK,WG,IT) ...TRANSISTOR DTA144ES
Q504	8-729-620-05	(US,CND,AEP,UK,WG,IT) ...TRANSISTOR 2SC2603-EF
Q505	8-729-900-61	TRANSISTOR DTA114ES
Q506	8-729-900-61	TRANSISTOR DTA114ES
Q507	8-729-900-65	TRANSISTOR DTA144ES

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Ref.No.	Part No.	Description
Q508	8-729-900-65	TRANSISTOR DTA144ES
Q509	8-729-900-61	TRANSISTOR DTA114ES
Q510	8-729-900-61	TRANSISTOR DTA114ES
Q511	8-729-900-61	TRANSISTOR DTA114ES
Q512	8-729-900-61	TRANSISTOR DTA114ES
Q513	8-729-900-61	TRANSISTOR DTA114ES
Q514	8-729-620-05	TRANSISTOR 2SC2603-EF
Q515	8-729-900-89	TRANSISTOR DTC144ES
Q517	8-729-900-89	TRANSISTOR DTC144ES
Q518	8-729-900-65	TRANSISTOR DTA144ES
Q703	8-729-801-93	TRANSISTOR 2SD1387-3
Q801	8-729-140-84	TRANSISTOR 2SA1841-PAFAEA
Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q803	8-729-900-65	TRANSISTOR DTA144ES
Q804	8-729-801-93	TRANSISTOR 2SD1387-3
Q851	8-729-140-84	TRANSISTOR 2SA1841-PAFAEA
Q901	8-729-801-93	TRANSISTOR 2SD1387-3
Q902	8-729-801-84	TRANSISTOR 2SB1013-4
Q903	8-729-900-89	TRANSISTOR DTC144ES
Q904	8-729-620-05	TRANSISTOR 2SC2603-EF
R101	1-249-417-11	(E,EA,AUS)...CARBON 1K 5% 1/4W
R102	1-249-429-11	(E,EA,AUS)...CARBON 10K 5% 1/4W
R103	1-249-423-11	(E,EA,AUS)...CARBON 3.3K 5% 1/4W
R104	1-249-429-11	CARBON 10K 5% 1/4W
R105	1-249-426-11	CARBON 5.6K 5% 1/4W
R107	1-249-417-11	CARBON 1K 5% 1/4W
R108	1-249-417-11	CARBON 1K 5% 1/4W
R109	1-249-438-11	CARBON 56K 5% 1/4W
R110	1-249-417-11	CARBON 1K 5% 1/4W
R111	1-249-437-11	CARBON 47K 5% 1/4W
R112	1-247-897-11	CARBON 560K 5% 1/4W
R113	1-249-429-11	CARBON 10K 5% 1/4W
R114	1-249-430-11	CARBON 12K 5% 1/4W
R115	1-249-405-11	CARBON 100 5% 1/4W
R121	1-249-428-11	CARBON 8.2K 5% 1/4W
R122	1-249-423-11	CARBON 3.3K 5% 1/4W
R123	1-249-435-11	CARBON 33K 5% 1/4W
R124	1-249-438-11	CARBON 56K 5% 1/4W
R125	1-249-435-11	CARBON 33K 5% 1/4W
R126	1-249-441-11	CARBON 100K 5% 1/4W
R127	1-249-435-11	CARBON 33K 5% 1/4W
R128	1-249-438-11	CARBON 56K 5% 1/4W
R129	1-249-427-11	CARBON 6.8K 5% 1/4W
R130	1-249-439-11	CARBON 68K 5% 1/4W
R131	1-249-427-11	CARBON 6.8K 5% 1/4W
R132	1-247-903-00	CARBON 1M 5% 1/4W
R133	1-247-903-00	CARBON 1M 5% 1/4W
R134	1-247-903-00	CARBON 1M 5% 1/4W
R135	1-247-903-00	CARBON 1M 5% 1/4W
R136	1-247-903-00	CARBON 1M 5% 1/4W
R137	1-247-903-00	CARBON 1M 5% 1/4W
R138	1-247-903-00	CARBON 1M 5% 1/4W
R141	1-249-417-11	CARBON 1K 5% 1/4W
R142	1-249-417-11	CARBON 1K 5% 1/4W
R143	1-249-417-11	CARBON 1K 5% 1/4W
R144	1-249-429-11	CARBON 10K 5% 1/4W

Ref.No.	Part No.	Description
R145	1-249-426-11	CARBON 5.6K 5% 1/4W
R147	1-249-429-11	CARBON 10K 5% 1/4W
R148	1-249-427-11	CARBON 6.8K 5% 1/4W
R151	1-249-417-11	(E,EA,AUS)...CARBON 1K 5% 1/4W
R152	1-249-429-11	(E,EA,AUS)...CARBON 10K 5% 1/4W
R153	1-249-423-11	(E,EA,AUS)...CARBON 3.3K 5% 1/4W
R154	1-249-429-11	CARBON 10K 5% 1/4W
R155	1-249-426-11	CARBON 5.6K 5% 1/4W
R157	1-249-417-11	CARBON 1K 5% 1/4W
R158	1-249-417-11	CARBON 1K 5% 1/4W
R159	1-249-438-11	CARBON 56K 5% 1/4W
R160	1-249-417-11	CARBON 1K 5% 1/4W
R161	1-249-437-11	CARBON 47K 5% 1/4W
R162	1-247-897-11	CARBON 560K 5% 1/4W
R163	1-249-429-11	CARBON 10K 5% 1/4W
R164	1-249-430-11	CARBON 12K 5% 1/4W
R165	1-249-405-11	CARBON 100 5% 1/4W
R171	1-249-428-11	CARBON 8.2K 5% 1/4W
R172	1-249-423-11	CARBON 3.3K 5% 1/4W
R173	1-249-435-11	CARBON 33K 5% 1/4W
R174	1-249-438-11	CARBON 56K 5% 1/4W
R175	1-249-435-11	CARBON 33K 5% 1/4W
R176	1-249-441-11	CARBON 100K 5% 1/4W
R177	1-249-435-11	CARBON 33K 5% 1/4W
R178	1-249-438-11	CARBON 56K 5% 1/4W
R179	1-249-427-11	CARBON 6.8K 5% 1/4W
R181	1-249-427-11	CARBON 6.8K 5% 1/4W
R182	1-247-903-00	CARBON 1M 5% 1/4W
R183	1-247-903-00	CARBON 1M 5% 1/4W
R184	1-247-903-00	CARBON 1M 5% 1/4W
R185	1-247-903-00	CARBON 1M 5% 1/4W
R186	1-247-903-00	CARBON 1M 5% 1/4W
R187	1-247-903-00	CARBON 1M 5% 1/4W
R188	1-247-903-00	CARBON 1M 5% 1/4W
R194	1-249-429-11	CARBON 10K 5% 1/4W
R195	1-249-426-11	CARBON 5.6K 5% 1/4W
R197	1-249-429-11	CARBON 10K 5% 1/4W
R198	1-249-427-11	CARBON 6.8K 5% 1/4W
R201	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON 10K 5% 1/4W
R202	1-249-423-11	(US,CND,AEP,UK,WG,IT) ...CARBON 3.3K 5% 1/4W
R203	1-249-405-11	CARBON 100 5% 1/4W
R204	1-249-441-11	CARBON 100K 5% 1/4W
R205	1-249-441-11	CARBON 100K 5% 1/4W
R251	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON 10K 5% 1/4W
R252	1-249-423-11	(US,CND,AEP,UK,WG,IT) ...CARBON 3.3K 5% 1/4W
R301 ⚠	1-212-970-00	FUSIBLE 33 5% 1/2W F
R302 ⚠	1-212-970-00	FUSIBLE 33 5% 1/2W F
R303 ⚠	1-217-469-00	(US)...FUSIBLE 1 5% 1W F
R304	1-249-393-11	(US)...CARBON 10 5% 1/4W
R401	1-249-432-11	CARBON 18K 5% 1/4W
R402	1-247-891-00	CARBON 330K 5% 1/4W
R403	1-249-419-11	CARBON 1.5K 5% 1/4W
R404	1-249-425-11	CARBON 4.7K 5% 1/4W
R405	1-249-441-11	CARBON 100K 5% 1/4W

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Ref.No.	Part No.	Description			
R408	1-249-429-11	CARBON	10K	5%	1/4W
R411	1-249-429-11	CARBON	10K	5%	1/4W
R412	1-249-441-11	CARBON	100K	5%	1/4W
R413	1-249-429-11	CARBON	10K	5%	1/4W
R414	1-249-411-11	CARBON	330	5%	1/4W
R415	1-249-419-11	CARBON	1.5K	5%	1/4W
R416	1-249-405-11	CARBON	100	5%	1/4W
R421	1-249-429-11	CARBON	10K	5%	1/4W
R422	1-249-415-11	CARBON	680	5%	1/4W
R423	1-249-434-11	CARBON	27K	5%	1/4W
R424	1-249-441-11	CARBON	100K	5%	1/4W
R425	1-249-422-11	CARBON	2.7K	5%	1/4W
R426	1-249-429-11	CARBON	10K	5%	1/4W
R427	1-249-414-11	CARBON	560	5%	1/4W
R451	1-249-432-11	CARBON	18K	5%	1/4W
R452	1-247-891-00	CARBON	330K	5%	1/4W
R453	1-249-419-11	CARBON	1.5K	5%	1/4W
R454	1-249-425-11	CARBON	4.7K	5%	1/4W
R455	1-249-441-11	CARBON	100K	5%	1/4W
R458	1-249-429-11	CARBON	10K	5%	1/4W
R501	1-247-903-00	CARBON	1M	5%	1/4W
R502	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-249-441-11	CARBON	100K	5%	1/4W
R505	1-249-417-11	CARBON	1K	5%	1/4W
R506	1-249-429-11	CARBON	10K	5%	1/4W
R507	1-249-429-11	CARBON	10K	5%	1/4W
R508	1-249-429-11	CARBON	10K	5%	1/4W
R509	1-249-429-11	CARBON	10K	5%	1/4W
R510	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R511	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R512	1-249-429-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10K	5%	1/4W
R513	1-249-393-11	(US,CND,AEP,UK,WG,IT) ...CARBON	10	5%	1/4W
R515	1-249-409-11	CARBON	220	5%	1/4W
R516	1-249-417-11	CARBON	1K	5%	1/4W
R517	1-249-429-11	CARBON	10K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-249-417-11	CARBON	1K	5%	1/4W
R521	1-249-417-11	CARBON	1K	5%	1/4W
R522	1-249-417-11	CARBON	1K	5%	1/4W
R523	1-249-417-11	CARBON	1K	5%	1/4W
R524	1-249-417-11	CARBON	1K	5%	1/4W
R525	1-249-413-11	CARBON	470	5%	1/4W
R526	1-249-413-11	CARBON	470	5%	1/4W
R527	1-249-413-11	CARBON	470	5%	1/4W
R528	1-249-413-11	CARBON	470	5%	1/4W
R529	1-249-413-11	CARBON	470	5%	1/4W
R530	1-249-413-11	CARBON	470	5%	1/4W
R531	1-249-413-11	CARBON	470	5%	1/4W
R532	1-249-413-11	CARBON	470	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R535	1-249-417-11	CARBON	1K	5%	1/4W
R536	1-249-417-11	CARBON	1K	5%	1/4W

Ref.No.	Part No.	Description			
R537	1-249-417-11	CARBON	1K	5%	1/4W
R538	1-249-429-11	CARBON	10K	5%	1/4W
R539	1-249-429-11	CARBON	10K	5%	1/4W
R541	1-249-423-11	CARBON	3.3K	5%	1/4W
R542	1-249-413-11	CARBON	470	5%	1/4W
R543	1-249-415-11	CARBON	680	5%	1/4W
R544	1-249-416-11	CARBON	820	5%	1/4W
R545	1-249-419-11	CARBON	1.5K	5%	1/4W
R546	1-249-421-11	CARBON	2.2K	5%	1/4W
R547	1-249-425-11	CARBON	4.7K	5%	1/4W
R548	1-249-430-11	CARBON	12K	5%	1/4W
R550	1-249-417-11	CARBON	1K	5%	1/4W
R551	1-249-423-11	CARBON	3.3K	5%	1/4W
R552	1-249-413-11	CARBON	470	5%	1/4W
R553	1-249-415-11	CARBON	680	5%	1/4W
R554	1-249-416-11	CARBON	820	5%	1/4W
R555	1-249-419-11	CARBON	1.5K	5%	1/4W
R556	1-249-421-11	CARBON	2.2K	5%	1/4W
R557	1-249-425-11	CARBON	4.7K	5%	1/4W
R558	1-249-430-11	CARBON	12K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-249-441-11	CARBON	100K	5%	1/4W
R562	1-249-441-11	CARBON	100K	5%	1/4W
R563	1-249-441-11	CARBON	100K	5%	1/4W
R564	1-249-432-11	CARBON	18K	5%	1/4W
R565	1-247-896-11	CARBON	510K	5%	1/4W
R566	1-249-441-11	CARBON	100K	5%	1/4W
R567	1-249-425-11	CARBON	4.7K	5%	1/4W
R568	1-249-425-11	CARBON	4.7K	5%	1/4W
R569	1-249-417-11	CARBON	1K	5%	1/4W
R579	1-249-441-11	CARBON	100K	5%	1/4W
R580	1-249-441-11	CARBON	100K	5%	1/4W
R601	1-249-417-11	(E,EA,AUS)...CARBON	1K	5%	1/4W
R602	1-249-405-11	(E,EA,AUS)...CARBON	100	5%	1/4W
R701 ⚠	1-212-857-00	FUSIBLE	10	5%	1/4W F
R707	1-249-415-11	CARBON	680	5%	1/4W
R708	1-249-422-11	CARBON	2.7K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-417-11	CARBON	1K	5%	1/4W
R712	1-249-417-11	CARBON	1K	5%	1/4W
R713	1-249-417-11	CARBON	1K	5%	1/4W
R721	1-249-429-11	CARBON	10K	5%	1/4W
R722	1-249-430-11	CARBON	12K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-405-11	CARBON	100	5%	1/4W
R771	1-249-429-11	CARBON	10K	5%	1/4W
R772	1-249-430-11	CARBON	12K	5%	1/4W
R773	1-249-441-11	CARBON	100K	5%	1/4W
R774	1-249-405-11	CARBON	100	5%	1/4W
R801	1-249-429-11	CARBON	10K	5%	1/4W
R802	1-249-419-11	CARBON	1.5K	5%	1/4W
R803	1-249-438-11	CARBON	56K	5%	1/4W
R804	1-249-414-11	CARBON	560	5%	1/4W
R805	1-249-438-11	CARBON	56K	5%	1/4W
R806	1-249-421-11	CARBON	2.2K	5%	1/4W
R807	1-247-756-11	CARBON	2.2K	5%	1/2W

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Ref.No.	Part No.	Description				
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R810	1-249-438-11	CARBON	56K	5%	1/4W	
R811	1-217-151-00	METAL PLATE	0.22		2W	
R813	1-249-431-11	CARBON	15K	5%	1/4W	
R814	1-249-441-11	CARBON	100K	5%	1/4W	
R815	1-249-417-11	CARBON	1K	5%	1/4W	
R821 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R822	1-247-752-11	CARBON	1K	5%	1/2W	
R823	1-247-752-11	CARBON	1K	5%	1/2W	
R824 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R825	1-249-441-11	CARBON	100K	5%	1/4W	
R826	1-249-429-11	CARBON	10K	5%	1/4W	
R828	1-249-433-11	CARBON	22K	5%	1/4W	
R829	1-249-433-11	CARBON	22K	5%	1/4W	
R830 ⚠	1-247-744-11	CARBON	270	5%	1/2W	F
R831	1-249-439-11	CARBON	68K	5%	1/4W	
R832	1-249-430-11	CARBON	12K	5%	1/4W	
R833	1-249-429-11	CARBON	10K	5%	1/4W	
R834	1-249-429-11	CARBON	10K	5%	1/4W	
R837	1-249-441-11	CARBON	100K	5%	1/4W	
R851	1-249-429-11	CARBON	10K	5%	1/4W	
R852	1-249-419-11	CARBON	1.5K	5%	1/4W	
R853	1-249-438-11	CARBON	56K	5%	1/4W	
R854	1-249-414-11	CARBON	560	5%	1/4W	
R855	1-249-438-11	CARBON	56K	5%	1/4W	
R856	1-249-421-11	CARBON	2.2K	5%	1/4W	
R857	1-247-756-11	CARBON	2.2K	5%	1/2W	
R858	1-249-441-11	CARBON	100K	5%	1/4W	
R860	1-249-437-11	CARBON	47K	5%	1/4W	
R861	1-217-151-00	METAL PLATE	0.22		2W	
R862 ⚠	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R863	1-249-431-11	CARBON	15K	5%	1/4W	
R864	1-249-441-11	CARBON	100K	5%	1/4W	
R865	1-249-417-11	CARBON	1K	5%	1/4W	
R891 ⚠	1-247-727-11	CARBON	10	5%	1/2W	F
R892 ⚠	1-247-727-11	CARBON	10	5%	1/2W	F
R893	1-249-399-11	CARBON	33	5%	1/4W	
R894	1-249-399-11	CARBON	33	5%	1/4W	
R901	1-249-427-11	CARBON	6.8K	5%	1/4W	
R902	1-249-417-11	CARBON	1K	5%	1/4W	
R903	1-249-429-11	CARBON	10K	5%	1/4W	
R904	1-249-429-11	CARBON	10K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-425-11	CARBON	4.7K	5%	1/4W	
R907 ⚠	1-212-873-11	FUSIBLE	47	5%	1/4W	F

Ref.No.	Part No.	Description
R908 ⚠	1-202-725-00	(US,CND)...SOLID 3.3M 10% 1/2W
R921	1-249-421-11	CARBON 2.2K 5% 1/4W
R922	1-249-429-11	CARBON 10K 5% 1/4W
R923	1-249-441-11	CARBON 100K 5% 1/4W
R924	1-249-405-11	CARBON 100 5% 1/4W
RB501	1-233-206-11	COMPOSITION CIRCUIT BLOCK (100KX12)
RB502	1-233-206-11	COMPOSITION CIRCUIT BLOCK (100KX12)
RV401	1-238-491-11	RES, VAR, CARBON 500K/500K (DBFB (SAT) LEVEL)
RV402	1-238-459-11	RES, VAR, CARBON 100K (BALANCE)
RV403	1-238-458-11	RES, VAR, CARBON 50K (MIC LEVEL)
RV701	1-238-708-11	RES, VAR, CARBON 10K/100K/100K(VOLUME)
RY801	1-515-533-11	RELAY
RY901	1-515-720-11	RELAY
S501	1-554-303-21	SWITCH, KEY BOARD (POWER)
S502	1-554-303-21	SWITCH, KEY BOARD (PROGRAM FUNCTION)
S503	1-554-303-21	SWITCH, KEY BOARD (SURROUND)
S504	1-554-303-21	SWITCH, KEY BOARD (TUNER)
S505	1-554-303-21	SWITCH, KEY BOARD (CD)
S506	1-554-303-21	SWITCH, KEY BOARD (TAPE)
S507	1-554-303-21	SWITCH, KEY BOARD (AUX/VIDEO)
S508	1-554-303-21	SWITCH, KEY BOARD (PHONO)
S511	1-554-303-21	SWITCH, KEY BOARD (EQUALIZATION)
S512	1-554-303-21	SWITCH, KEY BOARD (DISPLAY)
S513	1-554-303-21	SWITCH, KEY BOARD (MEMORY)
S514	1-554-303-21	SWITCH, KEY BOARD (CURSOR/PRESET EQ)
S515	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL △)
S516	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ▽)
S517	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ▷)
S518	1-554-303-21	SWITCH, KEY BOARD (CURSOR CONTROL ◁)
S901 ⚠	1-571-437-11	(E,EA,AUS)...SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)
TB801	1-536-705-00	TERMINAL BOARD (SP)(SPEAKER)
X501	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

TC-H201

SERVICE MANUAL

West Germany Model
E Model

TC-H201 is the cassette deck section in FH-E727CD, MHC-2300.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Model Name Using Similar Mechanism	TC-717/717M
Tape Transport Mechanism Type	TCM-170RB16

SPECIFICATIONS

Recording system	4-track 2-channel stereo
Frequency response	(DOLBY NR OFF)
	60 – 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S)
	60 – 14,000 Hz (±3 dB), using TYPE II cassette
	40 – 15,000 Hz (±3 dB) using TYPE IV cassette
Wow and flutter	0.1% WRMS ±0.3% (DIN)
Dimensions	Approx. 225 x 118 x 235 mm (w/h/d)
	(9 x 4 3/4 x 9 3/8 inches)
Weight	Approx. 2.5 kg (5 lb 8 oz)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

STEREO CASSETTE DECK

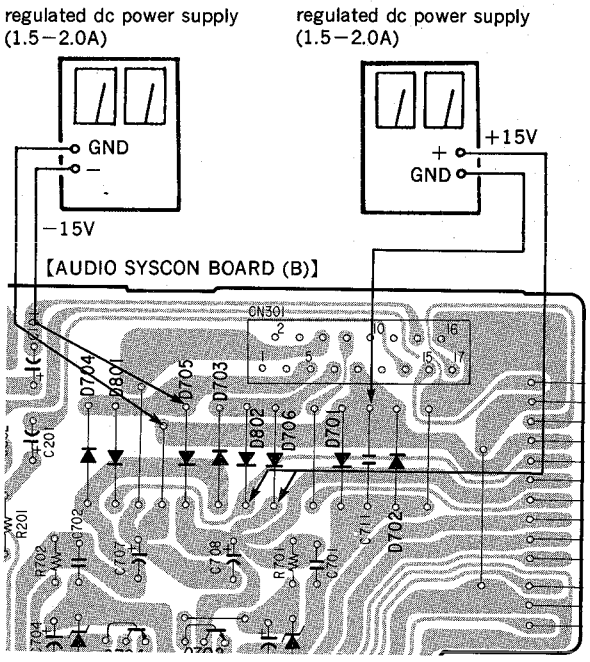
SONY®

SERVICING NOTES

REPAIRING PRECAUTION

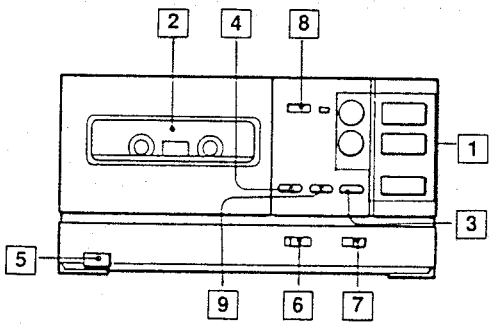
[To apply B+ voltage]

The power of this unit is fed from amplifier.
Because of this, connect the regulated power supply as illustrated below when this unit alone operates.



SECTION 1
GENERAL

PARTS IDENTIFICATION



1 Tape operation buttons
◀◀ / ▶▶: Fast winding
□: Stop
◁: Reverse play
▷: Forward play
2 Cassette holders
3 REC ● (recording) button
4 PAUSE button
5 EJECT buttons
6 DIRECTION MODE selector
7 DOLBY NR selector
8 TAPE COUNTER and RESET button
9 O Record muting button

SECTION 2
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback head — pinch roller
   erase head — rubber belts
   capstan — idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.
6. Swich position
   DOLBY NR : OFF
   DIRECTION MODE : ⇄

Torque Measurement

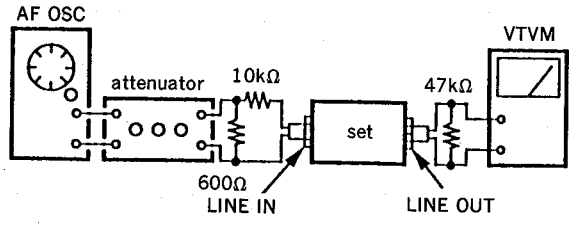
Torque	Torque Meter	Meter Reading
FWD	CQ-102C	27 to 75g•cm (0.378 to 1.05 oz•inch)
FWD Back tension	CQ-102C	1 to 10g•cm (0.014 to 0.14 oz•inch)
REV	CQ-102RC	27 to 75g•cm (0.378 to 1.05 oz•inch)
REV Back Tension	CQ-102RC	1 to 10g•cm (0.014 to 0.14 oz•inch)
FF, REW	CQ-102B	95 to 165g•cm (1.33 to 2.31 oz•inch)

SECTION 3
ELECTRICAL ADJUSTMENTS

Note: The adjustment should be performed in the order given in the service manual.
The adjustment should be performed for both L-CH and R-CH.

- Switches and controls, should be set as follows unless otherwise specified.
  DOLBY NR switch : OFF
  DIRECTION MODE switch : ⇄
- Standard Record:
  Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

—Record Mode—



Standard Input Level

	LINE IN
source impedance	10kΩ
input level	0.25V (−10dB)

Standard Output Level

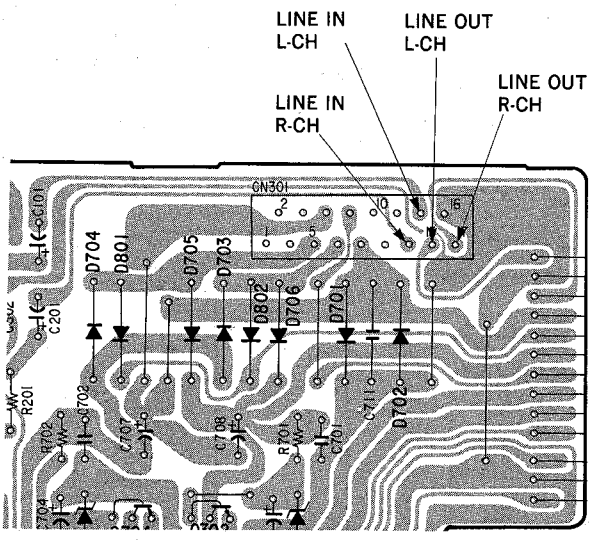
	LINE OUT
load impedance	47kΩ
output level	0.44V (−5dB)

Test Tape

Tape	Signal	Used for
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB LEVEL Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Location of LIEN IN/OUT

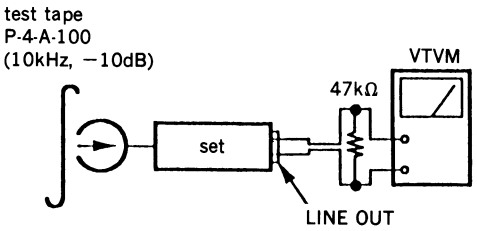
AUDIO SYSCON Board (B) CN301



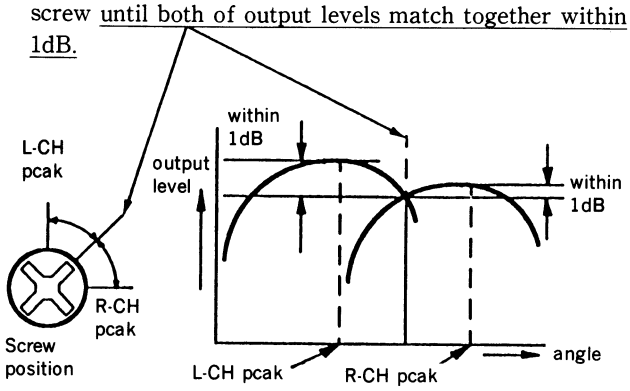
Record/Playback Head Azimuth Adjustment

Procedure :

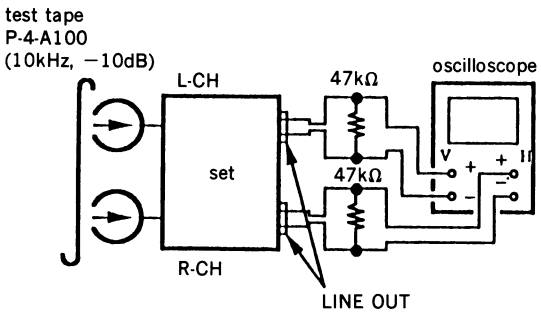
1. Mode : FWD playback

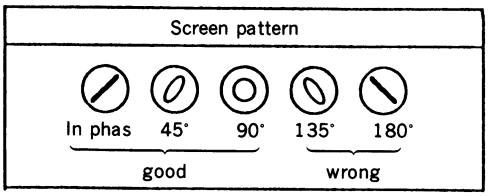


2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



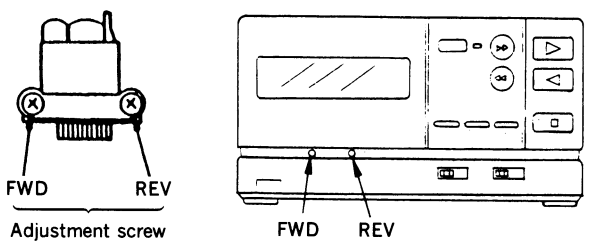
3. Phase Check
   Mode : playback





4. Set in the REV mode and repect the step 1-3.
5. After the adjustment, lock the screws with locking compound.

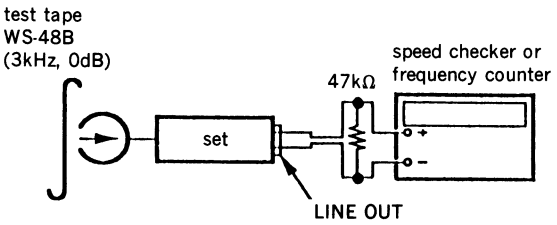
Adjustment Location : Record/Playback head
(Adjustment without disassembly.)



Tape Speed Adjustment

Procedure :

Mode : FWD playback



Specifications :

SPEED CHECKER	FREQUENCY COUNTER
1 to 0.3%	2,970 to 2,990Hz

Adjustment with the switch fixed variable resistor builtin the motor so that the frequency difference between the beginning and the end of the tape should be within 1.5% (45Hz).
Frequency difference between the beginning and the end of the tape should be within.

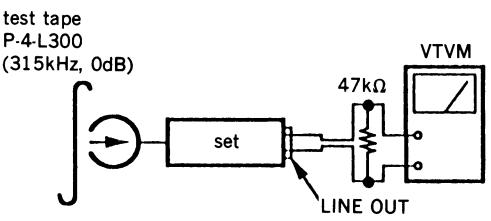
Adjustment Locatlon :

: motor (M901) rear side

Playback Level Adjustment

Procedure :

Mode : playback



Adjust RV41 (L-CH), RV61 (R-CH), so that the reading on VTVM meets the specification below.

Specification :

LINE OUT level : −10±0.5dB (0.23 to 0.26V)
Level difference between channels : less than 0.5dB

Check that the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : MD-B board

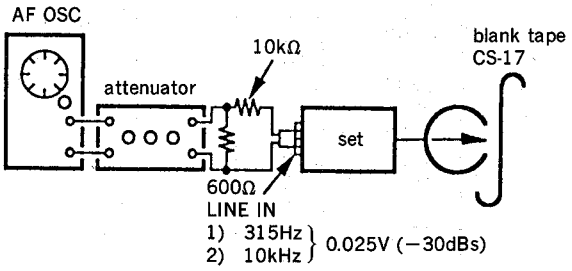
Record Bias Adjustment

Setting :

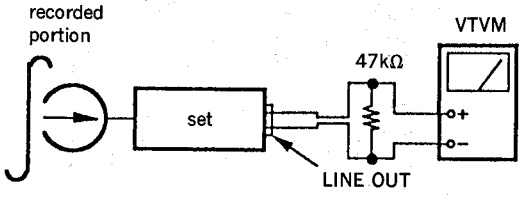
REC LEVEL control : standard record (See page 3.)

Procedure :

1. Mode : record



2. Mode : playback



Confirm that the 10kHz playback output is 0±0.5dB ralative to the 315Hz outupt. If necessary, adjust RV42 (L-CH), RV62 (R-CH) and repeat the stepes given above.

Adjustment Location : MD-B board

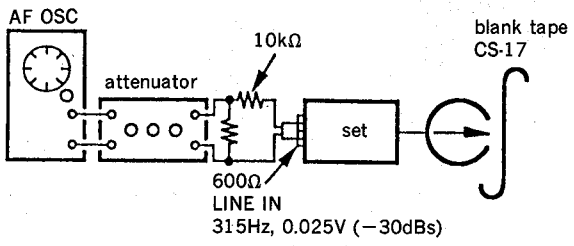
Record Level Adjustment

Setting :

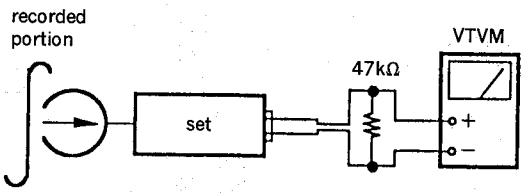
REC LEVEL control : standard record (See page 3.)

Procedure :

1. Mode : record



2. Mode : palyback



3. Playback the signal recorded in step 1.

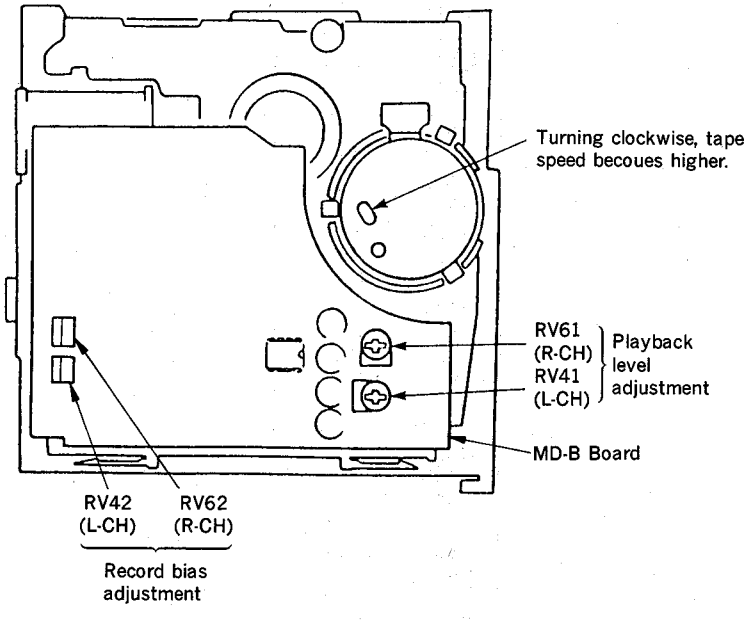
Confirm that the signal level is within the specification below. If necessary, adjust RV101 (L-CH), RV201 (R-CH) and repeat the step 1 to 3.

Specification : LINE OUT level : −30dB±0.5dBs (0.023 to 0.026V)

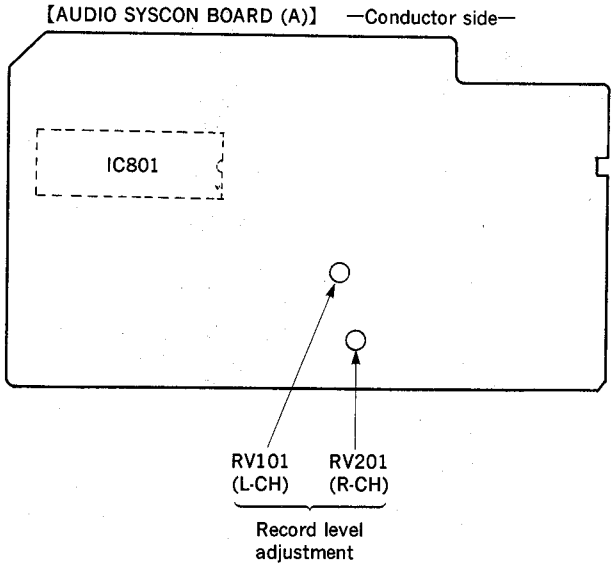
Adjustment Location :

ADJUSTING PARTS LOCATION DIAGRAM

【MD-B Board】 —Component Side—



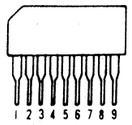
【AUDIO SYSCON BOARD (A)】 —Conductor side—



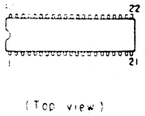
SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

BA3308

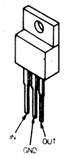


CX20187

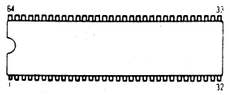


(Top view)

M5F7805L
M5F7812L

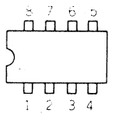


M50964-223SP



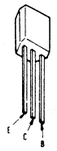
(Top view)

M5218AP
μPC4570C-1

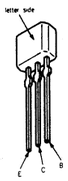


(Top view)

DTA114ES
DTC114ES
DTC143TS
2SC2603-EF

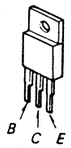


2SA1175-HFE

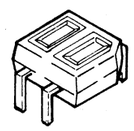


2SB1013-4
2SC2001-LK
2SD1616A-K

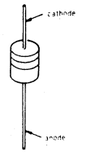
2SB10194-L
2SD2012



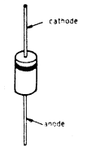
GP2S09-C



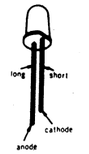
HZS7C2L
1SS202-1



10E2N



SEL1210S-C
SEL1410S-C
SEL1910S-C



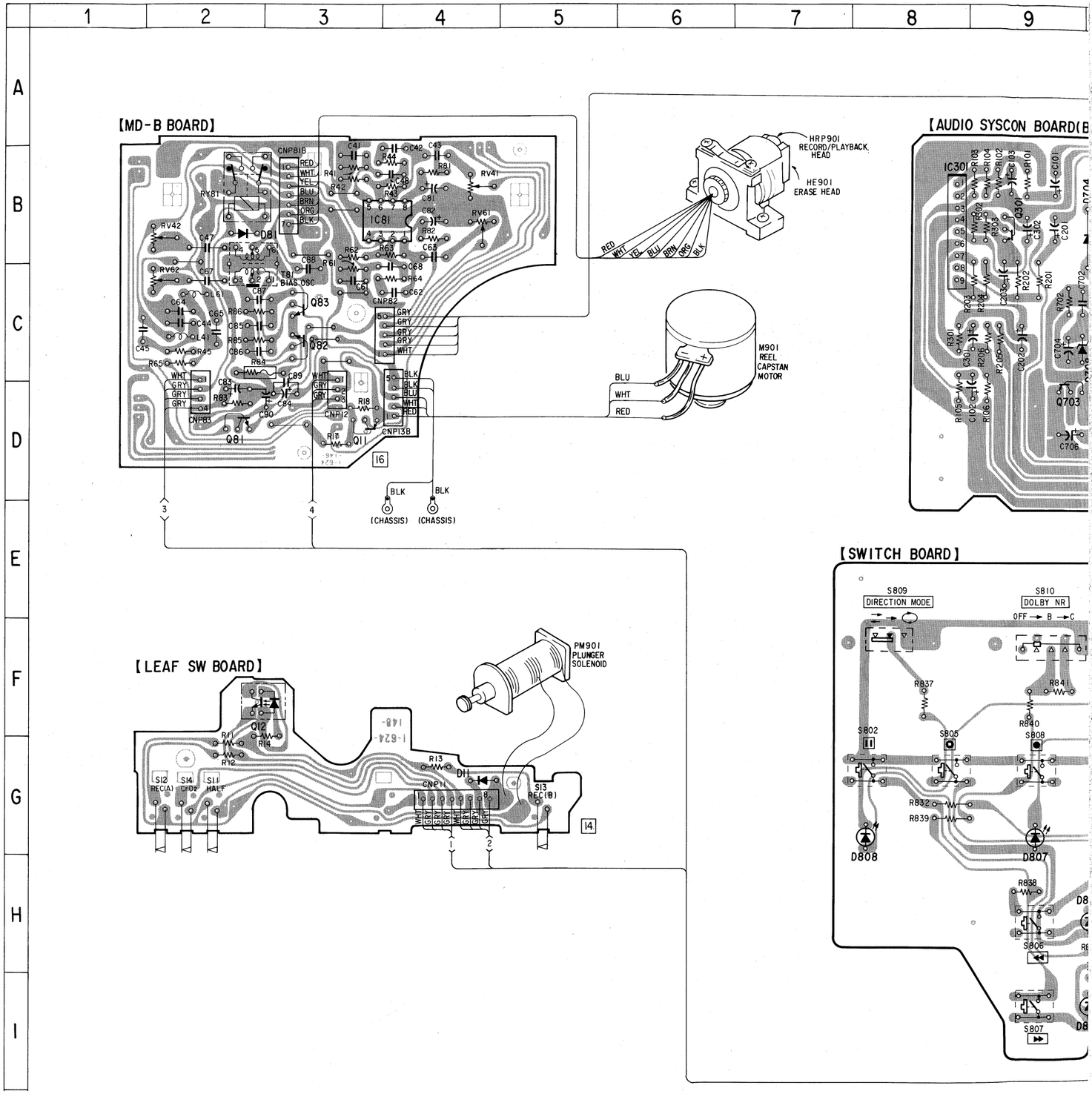
• Semiconductor Location

Ref. No.	Location
D11	G-4
D81	B-2
D301	G-12
D701	B-11
D702	B-11
D703	B-10
D704	B-10
D705	B-10
D706	B-11
D707	C-11
D708	C-10
D801	B-10
D802	B-10
D803	H-14
D804	E-13
D805	H-13
D806	H-12
D807	G-9
D808	G-8
D809	H-10
D810	I-10
IC81	B-4
IC301	B-8
IC302	C-14
IC303	I-15
IC701	E-12
IC702	D-12
IC801	G-13
Q11	D-3
Q12	F-2
Q81	D-2
Q82	C-3
Q83	C-3
Q101	E-15
Q102	H-15
Q103	H-15
Q104	B-15
Q105	D-15
Q201	E-15
Q202	F-15
Q203	F-15
Q204	B-16
Q205	E-15
Q301	B-9
Q302	E-13
Q303	E-14
Q304	E-14
Q701	D-10
Q702	C-10
Q703	D-9
Q704	C-10
Q801	H-12
Q802	H-12
Q803	H-14
Q804	H-14
Q805	H-14
Q806	H-12
Q807	F-12
Q808	F-12
Q809	G-14
Q810	H-12
Q811	F-12
Q812	G-12
Q813	G-14
Q814	G-14

Note:

- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.

3-2. PRINTED WIRING BOARDS



5 6 7 8 9 10 11 12 13 14 15 16

HRP901 RECORD/PLAYBACK HEAD
HE901 ERASE HEAD
RED WHT YEL BLU BRN ORG BLK
M901 REEL CAPSTAN MOTOR
BLU WHT RED
PM901 PLUNGER SOLENOID
SI3 REC(B)
14

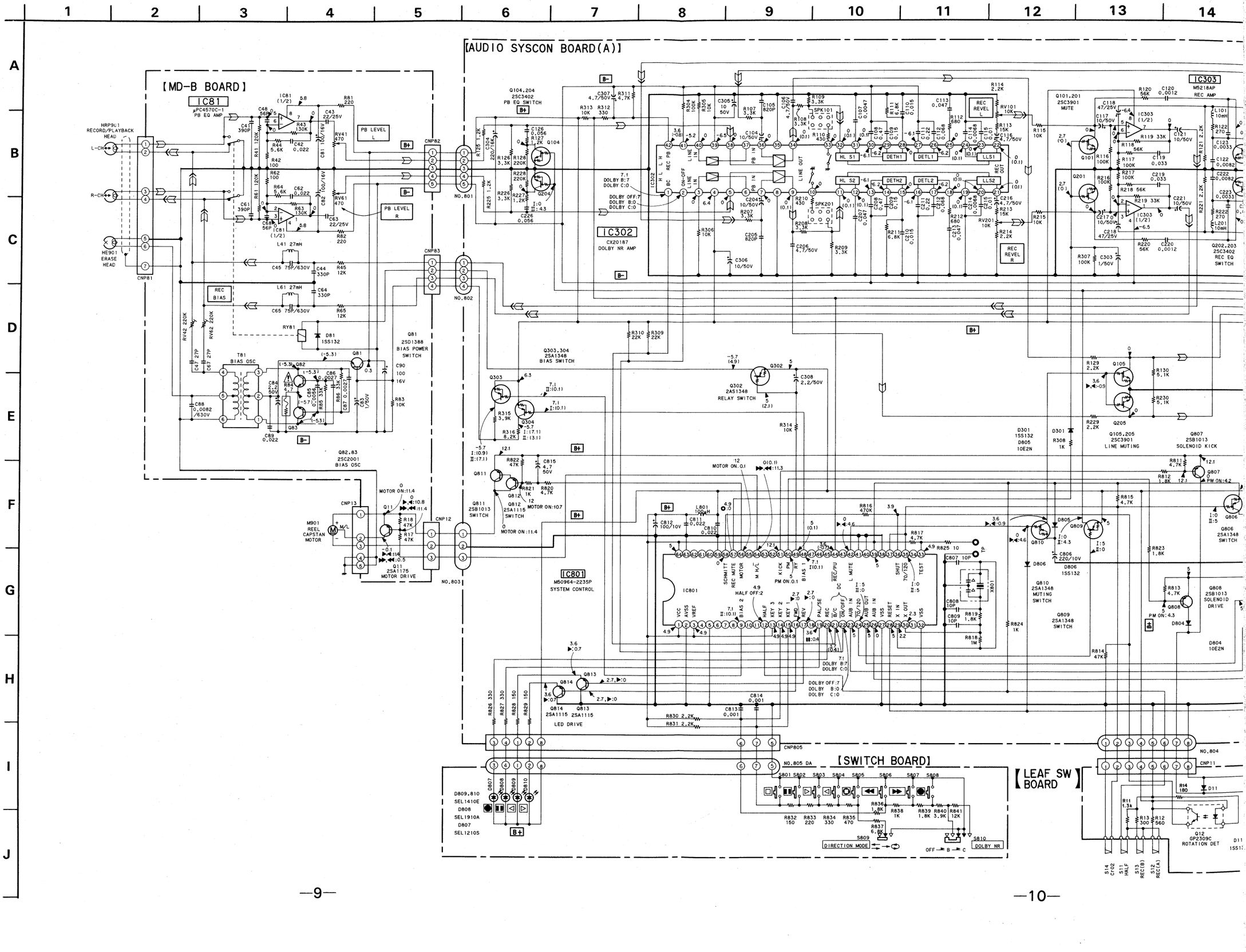
【AUDIO SYSCON BOARD(B)】

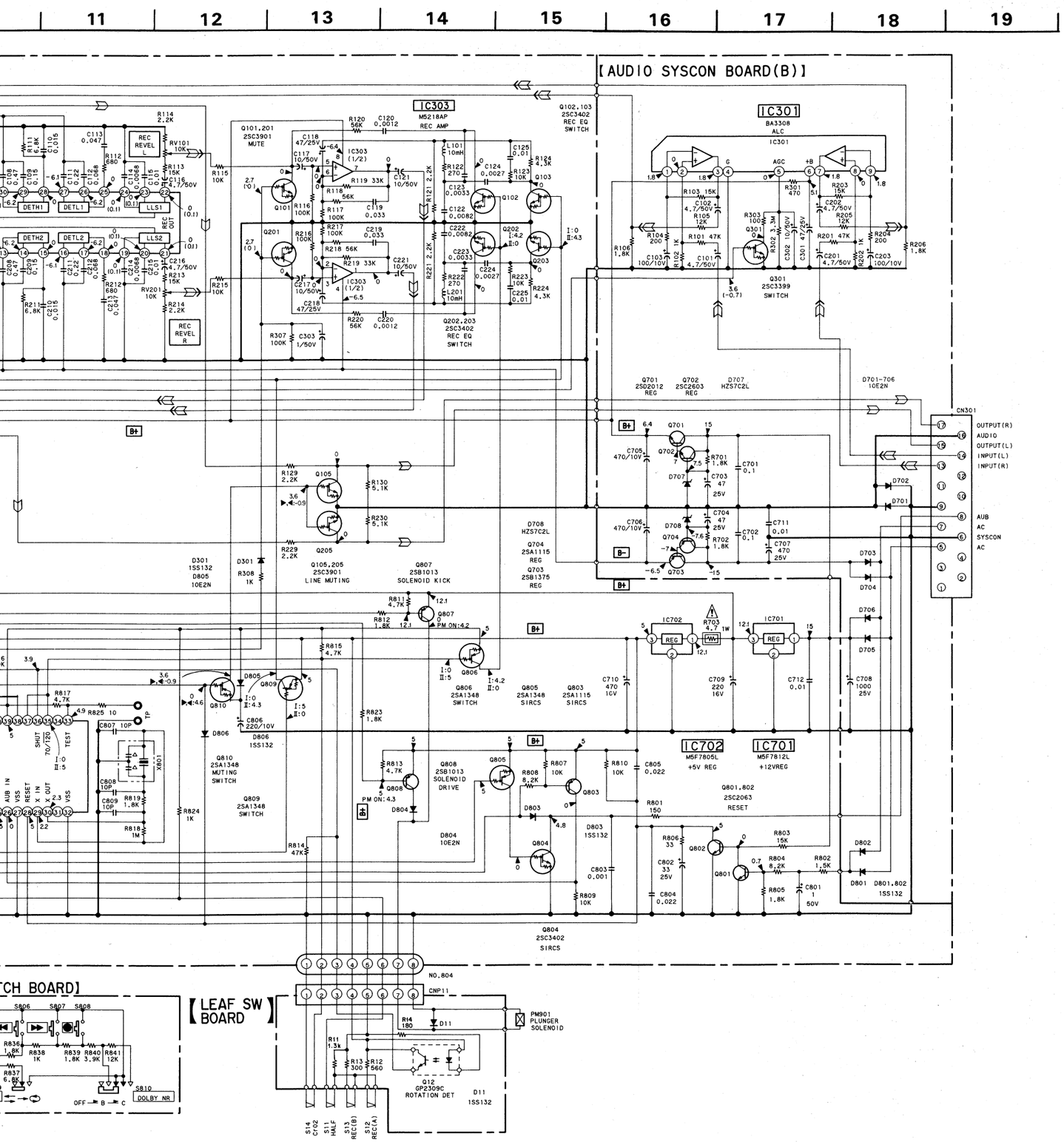
【AUDIO SYSCON BOARD(A)】

【SWITCH BOARD】

S809 DIRECTION MODE
S810 DOLBY NR OFF → B → C

3-3. SCHEMATIC DIAGRAM





Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- ⚠: fusible resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

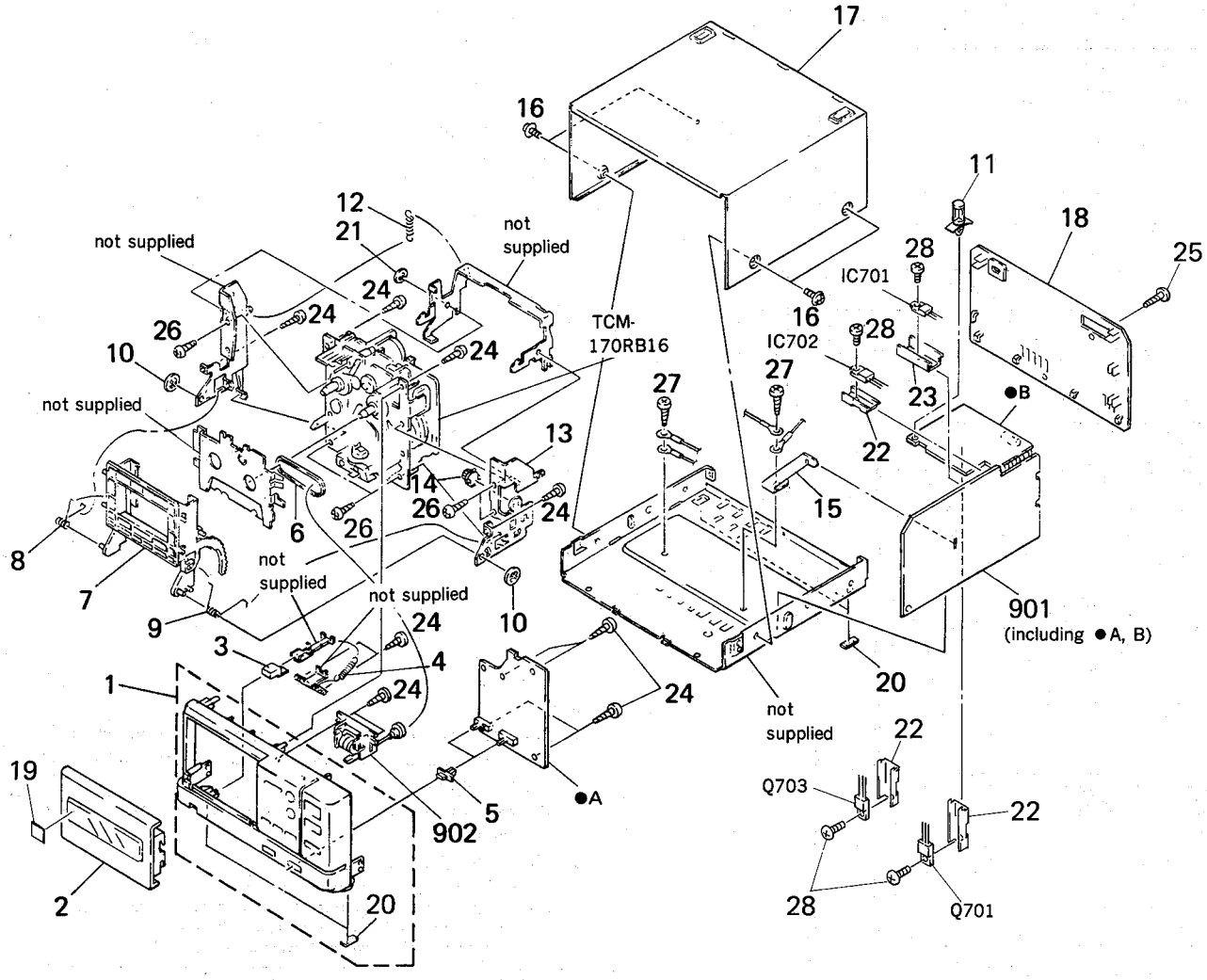
- ▭: adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : REC
  I : TYPE
  II : TYPE
- ▶ : FWD ◀ : REV ❚❚ : PAUSE
  ▶▶ : FF ◀◀ : REW ○ : REC MUTE
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  Σ : PB
  Σ» : REC

SECTION 4
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts Color

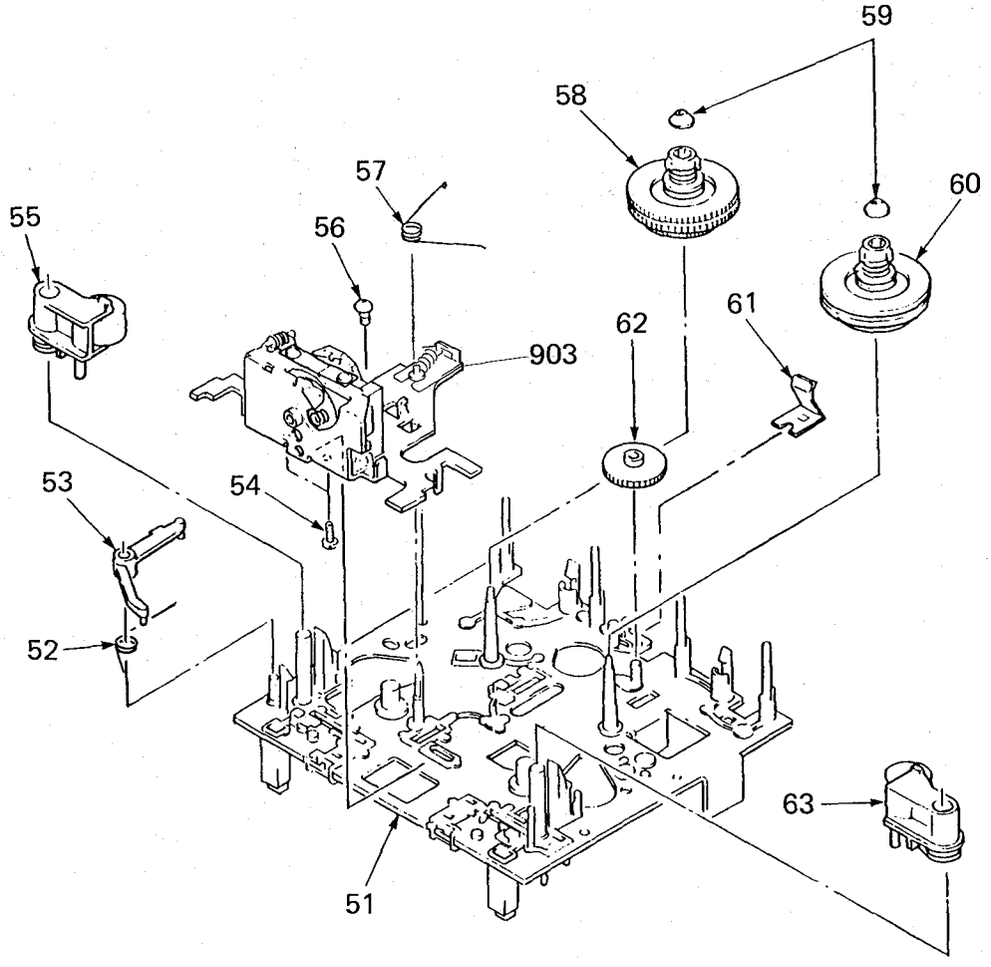
4-1. CHASSIS SECTION



Ref.No	Part No.	Description	Remarks
1	X-3352-804-1	PANEL ASSY, FRONT	20
2	X-3352-805-1	LID ASSY, CASSETTE	
3	3-352-810-01	BUTTON (EJECT)	
4	3-446-154-XX	SPRING, TENSION	
5	3-352-811-01	KNOB	
6	3-531-940-XX	BELT, COUNTER	
7	X-3343-628-1	HOLDER ASSY, CASSETTE	
8	3-343-687-01	SPRING (LOADING LEFT)	
9	3-343-688-01	SPRING (LOADING RIGHT)	
10	7-624-190-31	STOP RING 4, TYPE-CS	
11	*3-350-847-21	HOLDER, PCB	
12	3-343-689-01	SPRING, TENSION	
13	*X-3343-627-1	BRACKET (RB) ASSY	
14	X-3332-464-1	GEAR (DAMPER) ASSY	
15	*3-327-845-01	BRACKET	
16	3-704-366-01	SCREW (CASE) (M3X8)	
17	4-932-841-21	CASE	

Ref.No	Part No.	Description	Remarks
18	*3-354-982-12	PANEL, BACK	
19	*3-703-710-41	STICKER, SONY SYMBOL (12)	
20	4-930-336-01	FOOT (FELT)	
21	7-624-105-04	STOP RING 2.3, TYPE -E	
22	*3-309-144-21	HEAT SINK	
23	*4-880-403-11	HEAT SINK	
24	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
25	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
26	7-621-770-87	SCREW +BVTT 2.6X5 (S)	
27	7-682-547-04	SCREW +BVTT 3X6 (S)	
28	7-682-548-04	SCREW BVTT 3X8 (S)	
901	A-2006-282-A	MOUNTED PCB, AUDIO SYSCON	
902	1-548-596-41	COUNTER, TAPE (MIDDLE TYPE)	
IC701	8-759-604-33	IC M5F7812L	
IC702	8-759-604-29	IC M5F7805L	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q703	8-729-111-67	TRANSISTOR 2SB1094-L	

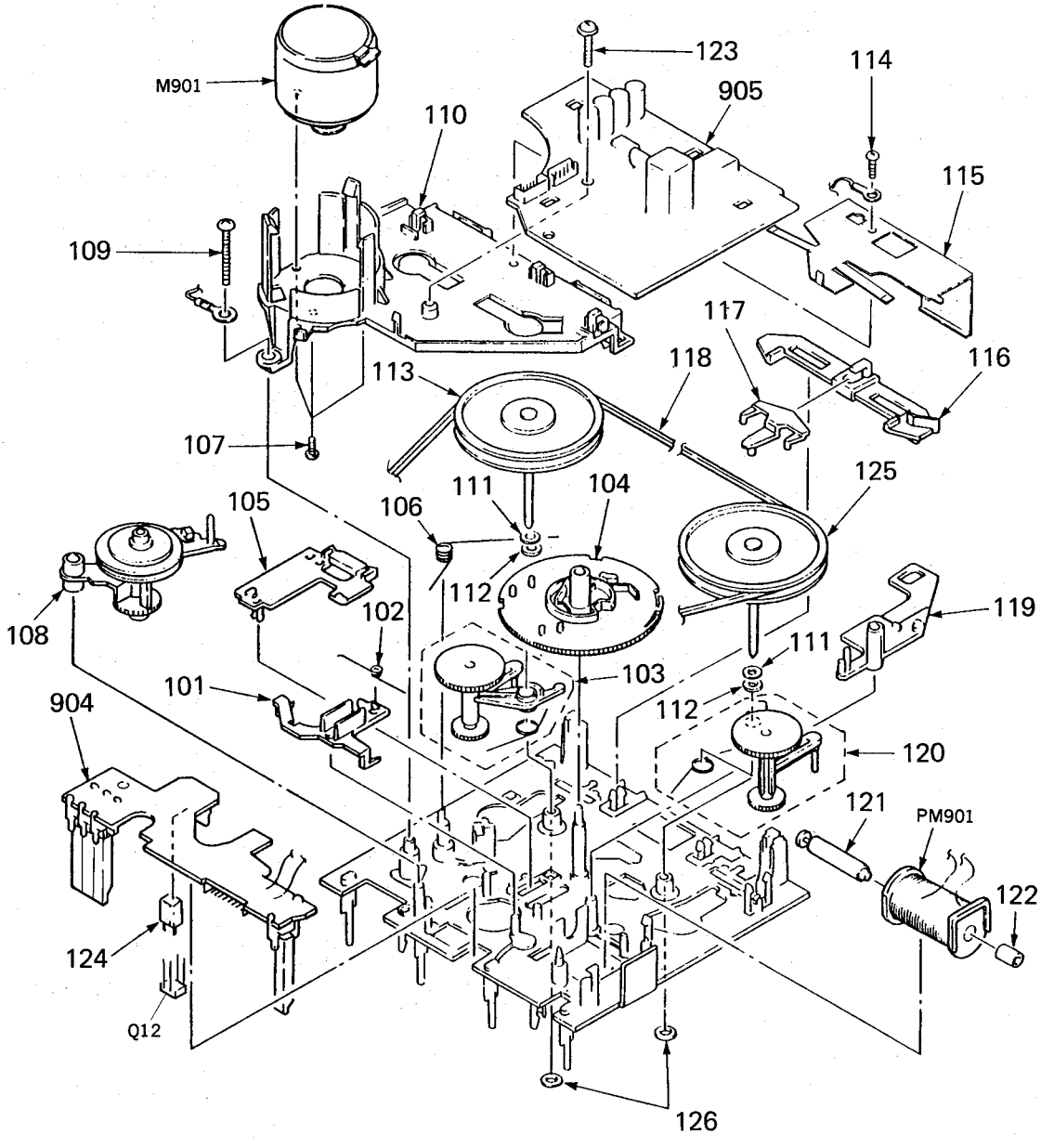
4-2. TAPE TRANSPORT MECHANISM SECTION-1 (TCM-170RB16)



Ref.No	Part No.	Description	Remarks
51	X-3343-439-1	CHASSIS ASSY, MECHANICAL	
52	3-343-477-01	SPRING, TORSION (EJECT SAFTY)	
53	3-343-476-01	LEVER (EJECT SAFETY LEVER)	
54	7-685-102-19	SCREW +P 2X4 NON-SLIT TYPE 2	
55	X-3343-456-1	LEVER (PINCH R) ASSY	
56	7-621-773-86	SCREW +BVTT 2.6X4 (S)	
57	3-343-401-01	SPRING, TORSION	

Ref.No	Part No.	Description	Remarks
58	X-3343-415-1	TABEL (REV) ASSY, REEL	
59	3-343-439-01	CAP (REEL TABLE)	
60	X-3343-401-1	TABEL ASSY, REEL	
61	3-343-420-01	SPRING, LEAF	
62	3-343-411-01	GEAR (FF GEAR)	
63	X-3343-455-1	LEVER (PINCH F) ASSY	
903	A-2108-130-C	CHASSIS ASSY, HEAD (HE901, HRP901	

4-3. TAPE TRANSPORT MECHANISM SECTION-2 (TCM-170RB16)



Ref.No	Part No.	Description	Remarks
101	3-343-453-01	SLIDER (BRAKE PLATE)	
102	3-343-429-01	SPRING, TORSION	
103	X-3343-454-1	LEVER (TU-R) ASSY	
104	3-343-470-01	GEAR (CAM GEAR)	
105	3-343-461-01	SLIDER	
106	3-343-430-01	SPRING, TORSION	
107	7-627-556-28	SCREW +P 2.6X3.5	
108	X-3343-414-1	LAVER (FR ARM) ASSY	
109	3-355-801-01	SCREW (BTP 2X18)	
110	*X-3343-407-1	BASE (THRUST RETAINER) ASSY	
111	4-605-835-11	WASHER (2.6), POLYSLIDER	
112	3-307-482-00	WASHER, LUMILER	
113	X-3343-411-6	FLYWHEEL COMPLETE ASSY	
114	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
115	3-343-480-01	PLATE, SHIELD	
116	3-343-457-01	SLIDER (REVERSE SLIDER)	

Ref.No	Part No.	Description	Remarks
117	3-343-462-01	LEVER	
118	3-313-816-00	BELT (CAPSTAN BELT SQUARE)	
119	3-343-493-01	LEVER (PM LEVER)	
120	X-3343-453-1	LEVER (TU-F) ASSY	
121	3-343-425-01	ARBOR(MOVABLE IRON ARBOR),IRON	
122	3-343-424-01	ARBOR (FIXED IRON ARBOR), IRON	
123	3-343-404-01	SCREW (PTPWH 2X12)	
124	3-343-419-01	HOLDER (S SENSER A)	
125	X-3343-416-7	FLYWHEEL (REV) COMPLETE ASSY	
126	3-343-473-01	WASHER, NYLON	
904	*1-624-148-11	PC BOARD, LEAF SW	
905	*1-625-912-14	PC BOARD, MD-B	
M901	X-3343-447-1	MOTOR ASSY	
PM901	1-454-456-11	SOLENOID, PLUNGER	
Q12	8-719-939-23	PHOTO TRANSISTOR GP2S09-C	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No	Part No.	Description
901	A-2006-282-A	MOUNTED PCB, AUDIO SYSCON
902	1-548-596-41	COUNTER, TAPE (MIDDLE TYPE)
903	A-2108-130-C	CHASSIS ASSY, HEAD (HE901, HRP901
904	*1-624-148-11	PC BOARD, LEAF SW
905	*1-625-912-14	PC BOARD, MD-B

CAPACITOR

Ref.No	Part No.	Description			
C41	1-110-342-11	MYLAR	390PF	5%	50V
C42	1-136-157-00	FILM	0.022MF	5%	50V
C43	1-124-282-00	ELECT	22MF	20%	25V
C44	1-162-288-31	CERAMIC	330PF	10%	50V
C45	1-136-273-91	FILM	75PF	5%	630V
C47	1-162-209-31	CERAMIC	27PF	5%	50V
C48	1-162-217-31	CERAMIC	56PF	5%	50V
C61	1-110-342-11	MYLAR	390PF	5%	50V
C62	1-136-157-00	FILM	0.022MF	5%	50V
C63	1-124-282-00	ELECT	22MF	20%	25V
C64	1-162-288-31	CERAMIC	330PF	10%	50V
C65	1-136-273-91	FILM	75PF	5%	630V
C67	1-162-209-31	CERAMIC	27PF	5%	50V
C68	1-162-217-31	CERAMIC	56PF	5%	50V
C81	1-126-101-11	ELECT	100MF	20%	16V
C82	1-126-101-11	ELECT	100MF	20%	16V
C83	1-124-791-11	ELECT	1MF	20%	50V
C84	1-124-925-11	ELECT	2.2MF	20%	50V
C85	1-130-480-00	MYLAR	0.0056MF	5%	50V
C86	1-130-476-00	MYLAR	0.0027MF	5%	50V
C87	1-130-476-00	MYLAR	0.0027MF	5%	50V
C88	1-136-562-11	FILM	0.0082MF	5%	630V
C89	1-161-494-00	CERAMIC	0.022MF		25V
C90	1-126-101-11	ELECT	100MF	20%	16V
C101	1-124-927-11	ELECT	4.7MF	20%	50V
C102	1-124-927-11	ELECT	4.7MF	20%	50V
C103	1-124-443-00	ELECT	100MF	20%	10V
C104	1-123-875-11	ELECT	10MF	20%	50V
C105	1-162-293-31	CERAMIC	820PF	10%	50V
C106	1-124-768-11	ELECT	4.7MF	20%	50V
C107	1-130-479-00	MYLAR	0.0047MF	5%	50V
C108	1-136-173-00	FILM	0.47MF	5%	50V
C109	1-136-167-00	FILM	0.15MF	5%	50V
C110	1-136-155-00	FILM	0.015MF	5%	50V
C111	1-136-169-00	FILM	0.22MF	5%	50V
C112	1-136-163-00	FILM	0.068MF	5%	50V
C113	1-136-161-00	FILM	0.047MF	5%	50V
C114	1-130-481-00	MYLAR	0.0068MF	5%	50V
C115	1-136-153-00	FILM	0.01MF	5%	50V
C116	1-124-927-11	ELECT	4.7MF	20%	50V
C117	1-123-875-11	ELECT	10MF	20%	50V
C118	1-124-477-11	ELECT	47MF	20%	25V
C119	1-136-159-00	FILM	0.033MF	5%	50V
C120	1-130-472-00	MYLAR	0.0012MF	5%	50V
C121	1-123-875-11	ELECT	10MF	20%	50V
C122	1-130-482-00	MYLAR	0.0082MF	5%	50V
C123	1-130-477-00	MYLAR	0.0033MF	5%	50V
C124	1-130-476-00	MYLAR	0.0027MF	5%	50V
C125	1-136-153-00	FILM	0.01MF	5%	50V
C126	1-136-162-00	FILM	0.056MF	5%	50V
C201	1-124-927-11	ELECT	4.7MF	20%	50V
C202	1-124-927-11	ELECT	4.7MF	20%	50V
C203	1-124-443-00	ELECT	100MF	20%	10V
C204	1-123-875-11	ELECT	10MF	20%	50V
C205	1-162-293-31	CERAMIC	820PF	10%	50V
C206	1-124-768-11	ELECT	4.7MF	20%	50V
C207	1-130-479-00	MYLAR	0.0047MF	5%	50V
C208	1-136-173-00	FILM	0.47MF	5%	50V
C209	1-136-167-00	FILM	0.15MF	5%	50V
C210	1-136-155-00	FILM	0.015MF	5%	50V
C211	1-136-169-00	FILM	0.22MF	5%	50V
C212	1-136-163-00	FILM	0.068MF	5%	50V
C213	1-136-161-00	FILM	0.047MF	5%	50V
C214	1-130-481-00	MYLAR	0.0068MF	5%	50V
C215	1-136-153-00	FILM	0.01MF	5%	50V
C216	1-124-927-11	ELECT	4.7MF	20%	50V
C217	1-123-875-11	ELECT	10MF	20%	50V
C218	1-124-477-11	ELECT	47MF	20%	25V
C219	1-136-159-00	FILM	0.033MF	5%	50V
C220	1-130-472-00	MYLAR	0.0012MF	5%	50V
C221	1-123-875-11	ELECT	10MF	20%	50V
C222	1-130-482-00	MYLAR	0.0082MF	5%	50V
C223	1-130-477-00	MYLAR	0.0033MF	5%	50V
C224	1-130-476-00	MYLAR	0.0027MF	5%	50V
C225	1-136-153-00	FILM	0.01MF	5%	50V
C226	1-136-162-00	FILM	0.056MF	5%	50V
C301	1-124-477-11	ELECT	47MF	20%	25V
C302	1-123-875-11	ELECT	10MF	20%	50V
C303	1-124-791-11	ELECT	1MF	20%	50V
C304	1-124-120-11	ELECT	220MF	20%	16V
C305	1-123-875-11	ELECT	10MF	20%	50V
C306	1-123-875-11	ELECT	10MF	20%	50V
C307	1-124-927-11	ELECT	4.7MF	20%	50V
C308	1-124-925-11	ELECT	2.2MF	20%	50V
C701	1-136-165-00	FILM	0.1MF	5%	50V
C702	1-136-165-00	FILM	0.1MF	5%	50V
C703	1-124-477-11	ELECT	47MF	20%	25V
C704	1-124-477-11	ELECT	47MF	20%	25V
C705	1-124-472-11	ELECT	470MF	20%	10V
C706	1-124-472-11	ELECT	470MF	20%	10V
C707	1-124-480-11	ELECT	470MF	20%	25V
C708	1-124-557-11	ELECT	1000MF	20%	25V
C709	1-124-120-11	ELECT	220MF	20%	16V
C710	1-124-472-11	ELECT	470MF	20%	10V
C711	1-161-379-00	CERAMIC	0.01MF	30%	16V
C712	1-136-153-00	FILM	0.01MF	5%	50V
C801	1-124-791-11	ELECT	1MF	20%	50V
C802	1-124-482-11	ELECT	33MF	20%	25V
C803	1-162-294-31	CERAMIC	0.001MF	10%	50V
C804	1-161-494-00	CERAMIC	0.022MF		25V
C805	1-161-494-00	CERAMIC	0.022MF		25V
C806	1-126-176-11	ELECT	220MF	20%	10V
C807	1-162-199-31	CERAMIC	10PF	5%	50V

Ref.No	Part No.	Description			
C808	1-162-199-31	CERAMIC	10PF	5%	50V
C809	1-162-199-31	CERAMIC	10PF	5%	50V
C810	1-161-494-00	CERAMIC	0.022MF		25V
C811	1-161-494-00	CERAMIC	0.022MF		25V
C812	1-124-443-00	ELECT	100MF	20%	10V
C813	1-162-294-31	CERAMIC	0.001MF	10%	50V
C814	1-162-294-31	CERAMIC	0.001MF	10%	50V
C815	1-124-927-11	ELECT	4.7MF	20%	50V
CN301	*1-569-624-11	SOCKET, CONNECTOR 17P			
CNP11	1-564-501-11	PIN, CONNECTOR 8P			
CNP12	*1-564-337-00	PIN, CONNECTOR 3P			
CNP13	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CNP81	*1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CNP82	*1-564-339-00	PIN, CONNECTOR 5P			
CNP83	*1-564-338-00	PIN, CONNECTOR 4P			
CNP805	*1-564-342-11	PIN, CONNECTOR 8P			
D11	8-719-107-94	DIODE 1SS202-1			
D81	8-719-107-94	DIODE 1SS202-1			
D301	8-719-107-94	DIODE 1SS202-1			
D701	8-719-200-77	DIODE 10E2N			
D702	8-719-200-77	DIODE 10E2N			
D703	8-719-200-77	DIODE 10E2N			
D704	8-719-200-77	DIODE 10E2N			
D705	8-719-200-77	DIODE 10E2N			
D706	8-719-200-77	DIODE 10E2N			
D707	8-719-933-50	DIODE HZS7C2L			
D708	8-719-933-50	DIODE HZS7C2L			
D801	8-719-107-94	DIODE 1SS202-1			
D802	8-719-107-94	DIODE 1SS202-1			
D803	8-719-107-94	DIODE 1SS202-1			
D804	8-719-200-77	DIODE 10E2N			
D805	8-719-200-77	DIODE 10E2N			
D806	8-719-107-94	DIODE 1SS202-1			
D807	8-719-302-46	DIODE SEL1210S-C			
D808	8-719-302-79	DIODE SEL1910A-C			
D809	8-719-302-53	DIODE SEL1410E-C			
D810	8-719-302-53	DIODE SEL1410E-C			
IC81	8-759-111-44	IC UPC4570C-1			
IC301	8-759-939-73	IC BA3308			
IC302	8-752-018-70	IC CX20187			
IC303	8-759-634-51	IC M5218AP			
IC701	8-759-604-33	IC M5F7812L			
IC702	8-759-604-29	IC M5F7805L			
IC801	8-759-635-01	IC M50964-223SP			
L41	1-410-780-11	INDUCTOR	27MMH		
L61	1-410-780-11	INDUCTOR	27MMH		
L101	1-410-775-21	INDUCTOR	10MMH		
L201	1-410-775-21	INDUCTOR	10MMH		
L801	1-410-521-11	INDUCTOR	100UH		
M901	X-3343-447-1	MOTOR ASSY			
PM901	1-454-456-11	SOLENOID, PLUNGER			
Q11	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q12	8-719-939-23	PHOTO TRANSISTOR GP2S09-C			
Q81	8-729-111-29	TRANSISTOR 2SD1616A-K			
Q82	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q83	8-729-142-46	TRANSISTOR 2SC2001-LK			
Q101	8-729-900-74	TRANSISTOR DTC143TS			
Q102	8-729-900-80	TRANSISTOR DTC114ES			
Q103	8-729-900-80	TRANSISTOR DTC114ES			
Q104	8-729-900-80	TRANSISTOR DTC114ES			
Q105	8-729-900-74	TRANSISTOR DTC143TS			

Ref.No	Part No.	Description
Q201	8-729-900-74	TRANSISTOR DTC143TS
Q202	8-729-900-80	TRANSISTOR DTC114ES
Q203	8-729-900-80	TRANSISTOR DTC114ES
Q204	8-729-900-80	TRANSISTOR DTC114ES
Q205	8-729-900-74	TRANSISTOR DTC143TS
Q301	8-729-900-89	TRANSISTOR DTC144ES
Q302	8-729-900-61	TRANSISTOR DTA114ES
Q303	8-729-900-61	TRANSISTOR DTA114ES
Q304	8-729-900-61	TRANSISTOR DTA114ES
Q701	8-729-209-15	TRANSISTOR 2SD2012
Q702	8-729-620-05	TRANSISTOR 2SC2603-EF
Q703	8-729-111-67	TRANSISTOR 2SB1094-L
Q704	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q801	8-729-620-05	TRANSISTOR 2SC2603-EF
Q802	8-729-620-05	TRANSISTOR 2SC2603-EF
Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q804	8-729-900-80	TRANSISTOR DTC114ES
Q805	8-729-900-61	TRANSISTOR DTA114ES
Q806	8-729-900-61	TRANSISTOR DTA114ES
Q807	8-729-801-84	TRANSISTOR 2SB1013-4
Q808	8-729-801-84	TRANSISTOR 2SB1013-4
Q809	8-729-900-61	TRANSISTOR DTA114ES
Q810	8-729-900-61	TRANSISTOR DTA114ES
Q811	8-729-801-84	TRANSISTOR 2SB1013-4
Q812	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q813	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q814	8-729-119-76	TRANSISTOR 2SA1175-HFE

RESISTOR

R11	1-247-834-11	CARBON	1.3K	5%	1/4W	
R12	1-249-414-11	CARBON	560	5%	1/4W	
R13	1-247-818-11	CARBON	300	5%	1/4W	
R14	1-249-408-11	CARBON	180	5%	1/4W	
R17	1-249-437-11	CARBON	47K	5%	1/4W	
R18	1-249-437-11	CARBON	47K	5%	1/4W	
R41	1-247-881-00	CARBON	120K	5%	1/4W	
R42	1-249-405-11	CARBON	100	5%	1/4W	
R43	1-247-882-11	CARBON	130K	5%	1/4W	
R44	1-249-426-11	CARBON	5.6K	5%	1/4W	
R45	1-249-430-11	CARBON	12K	5%	1/4W	
R61	1-247-881-00	CARBON	120K	5%	1/4W	
R62	1-249-405-11	CARBON	100	5%	1/4W	
R63	1-247-882-11	CARBON	130K	5%	1/4W	
R64	1-249-426-11	CARBON	5.6K	5%	1/4W	
R65	1-249-430-11	CARBON	12K	5%	1/4W	
R81	1-249-409-11	CARBON	220	5%	1/4W	
R82	1-249-409-11	CARBON	220	5%	1/4W	
R83	1-249-429-11	CARBON	10K	5%	1/4W	
R84	⚠1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R85	1-249-435-11	CARBON	33K	5%	1/4W	
R86	1-249-435-11	CARBON	33K	5%	1/4W	
R101	1-249-437-11	CARBON	47K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	
R103	1-249-431-11	CARBON	15K	5%	1/4W	
R104	1-247-814-11	CARBON	200	5%	1/4W	
R105	1-249-430-11	CARBON	12K	5%	1/4W	
R106	1-249-420-11	CARBON	1.8K	5%	1/4W	
R107	1-249-423-11	CARBON	3.3K	5%	1/4W	
R108	1-249-423-11	CARBON	3.3K	5%	1/4W	
R109	1-249-423-11	CARBON	3.3K	5%	1/4W	
R110	1-247-822-11	CARBON	430	5%	1/4W	
R111	1-249-427-11	CARBON	6.8K	5%	1/4W	
R112	1-249-415-11	CARBON	680	5%	1/4W	
R113	1-249-431-11	CARBON	15K	5%	1/4W	
R114	1-249-421-11	CARBON	2.2K	5%	1/4W	

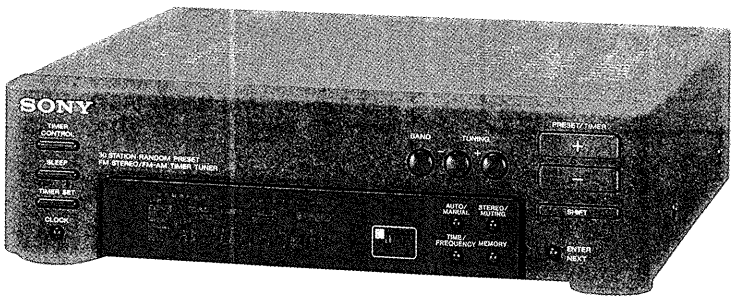
Ref.No	Part No.	Description				
R115	1-249-429-11	CARBON	10K	5%	1/4W	
R116	1-249-441-11	CARBON	100K	5%	1/4W	
R117	1-249-441-11	CARBON	100K	5%	1/4W	
R118	1-249-438-11	CARBON	56K	5%	1/4W	
R119	1-249-435-11	CARBON	33K	5%	1/4W	
R120	1-249-438-11	CARBON	56K	5%	1/4W	
R121	1-249-421-11	CARBON	2.2K	5%	1/4W	
R122	1-249-410-11	CARBON	270	5%	1/4W	
R123	1-249-429-11	CARBON	10K	5%	1/4W	
R124	1-247-846-11	CARBON	4.3K	5%	1/4W	
R125	1-249-418-11	CARBON	1.2K	5%	1/4W	
R126	1-249-423-11	CARBON	3.3K	5%	1/4W	
R127	1-249-418-11	CARBON	1.2K	5%	1/4W	
R128	1-247-887-00	CARBON	220K	5%	1/4W	
R129	1-249-421-11	CARBON	2.2K	5%	1/4W	
R130	1-247-848-11	CARBON	5.1K	5%	1/4W	
R201	1-249-437-11	CARBON	47K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-431-11	CARBON	15K	5%	1/4W	
R204	1-247-814-11	CARBON	200	5%	1/4W	
R205	1-249-430-11	CARBON	12K	5%	1/4W	
R206	1-249-420-11	CARBON	1.8K	5%	1/4W	
R207	1-249-423-11	CARBON	3.3K	5%	1/4W	
R208	1-249-423-11	CARBON	3.3K	5%	1/4W	
R209	1-249-423-11	CARBON	3.3K	5%	1/4W	
R210	1-247-822-11	CARBON	430	5%	1/4W	
R211	1-249-427-11	CARBON	6.8K	5%	1/4W	
R212	1-249-415-11	CARBON	680	5%	1/4W	
R213	1-249-431-11	CARBON	15K	5%	1/4W	
R214	1-249-421-11	CARBON	2.2K	5%	1/4W	
R215	1-249-429-11	CARBON	10K	5%	1/4W	
R216	1-249-441-11	CARBON	100K	5%	1/4W	
R217	1-249-441-11	CARBON	100K	5%	1/4W	
R218	1-249-438-11	CARBON	56K	5%	1/4W	
R219	1-249-435-11	CARBON	33K	5%	1/4W	
R220	1-249-438-11	CARBON	56K	5%	1/4W	
R221	1-249-421-11	CARBON	2.2K	5%	1/4W	
R222	1-249-410-11	CARBON	270	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-247-846-11	CARBON	4.3K	5%	1/4W	
R225	1-249-418-11	CARBON	1.2K	5%	1/4W	
R226	1-249-423-11	CARBON	3.3K	5%	1/4W	
R227	1-249-418-11	CARBON	1.2K	5%	1/4W	
R228	1-247-887-00	CARBON	220K	5%	1/4W	
R229	1-249-421-11	CARBON	2.2K	5%	1/4W	
R230	1-247-848-11	CARBON	5.1K	5%	1/4W	
R301	1-249-413-11	CARBON	470	5%	1/4W	
R302	1-259-882-11	CARBON	3.3M	5%	1/4W	
R303	1-249-405-11	CARBON	100	5%	1/4W	
R304	1-215-469-00	METAL	100K	1%	1/6W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	
R306	1-249-429-11	CARBON	10K	5%	1/4W	
R307	1-249-441-11	CARBON	100K	5%	1/4W	
R308	1-249-417-11	CARBON	1K	5%	1/4W	
R309	1-249-433-11	CARBON	22K	5%	1/4W	
R310	1-249-433-11	CARBON	22K	5%	1/4W	
R311	1-249-437-11	CARBON	47K	5%	1/4W	
R312	1-249-411-11	CARBON	330	5%	1/4W	
R313	1-249-429-11	CARBON	10K	5%	1/4W	
R314	1-249-429-11	CARBON	10K	5%	1/4W	
R315	1-249-424-11	CARBON	3.9K	5%	1/4W	
R316	1-249-428-11	CARBON	8.2K	5%	1/4W	
R701	1-249-420-11	CARBON	1.8K	5%	1/4W	
R702	1-249-420-11	CARBON	1.8K	5%	1/4W	
R703	1-216-357-00	METAL OXIDE	4.7	5%	1W	F

Ref.No	Part No.	Description			
R801	1-249-407-11	CARBON	150	5%	1/4W
R802	1-249-419-11	CARBON	1.5K	5%	1/4W
R803	1-249-431-11	CARBON	15K	5%	1/4W
R804	1-249-428-11	CARBON	8.2K	5%	1/4W
R805	1-249-420-11	CARBON	1.8K	5%	1/4W
R806	1-249-399-11	CARBON	33	5%	1/4W
R807	1-249-429-11	CARBON	10K	5%	1/4W
R808	1-249-428-11	CARBON	8.2K	5%	1/4W
R809	1-249-429-11	CARBON	10K	5%	1/4W
R810	1-249-429-11	CARBON	10K	5%	1/4W
R811	1-249-425-11	CARBON	4.7K	5%	1/4W
R812	1-249-420-11	CARBON	1.8K	5%	1/4W
R813	1-249-425-11	CARBON	4.7K	5%	1/4W
R814	1-249-437-11	CARBON	47K	5%	1/4W
R815	1-249-425-11	CARBON	4.7K	5%	1/4W
R816	1-247-895-00	CARBON	470K	5%	1/4W
R817	1-249-425-11	CARBON	4.7K	5%	1/4W
R818	1-247-903-00	CARBON	1M	5%	1/4W
R819	1-249-420-11	CARBON	1.8K	5%	1/4W
R820	1-249-425-11	CARBON	4.7K	5%	1/4W
R821	1-249-417-11	CARBON	1K	5%	1/4W
R822	1-249-437-11	CARBON	47K	5%	1/4W
R823	1-249-420-11	CARBON	1.8K	5%	1/4W
R824	1-249-417-11	CARBON	1K	5%	1/4W
R825	1-249-393-11	CARBON	10	5%	1/4W
R826	1-249-411-11	CARBON	330	5%	1/4W
R827	1-249-411-11	CARBON	330	5%	1/4W
R828	1-249-407-11	CARBON	150	5%	1/4W
R829	1-249-407-11	CARBON	150	5%	1/4W
R830	1-249-421-11	CARBON	2.2K	5%	1/4W
R831	1-249-421-11	CARBON	2.2K	5%	1/4W
R832	1-249-407-11	CARBON	150	5%	1/4W
R833	1-249-409-11	CARBON	220	5%	1/4W
R834	1-249-411-11	CARBON	330	5%	1/4W
R835	1-249-413-11	CARBON	470	5%	1/4W
R836	1-249-420-11	CARBON	1.8K	5%	1/4W
R837	1-249-427-11	CARBON	6.8K	5%	1/4W
R838	1-249-417-11	CARBON	1K	5%	1/4W
R839	1-249-420-11	CARBON	1.8K	5%	1/4W
R840	1-249-424-11	CARBON	3.9K	5%	1/4W
R841	1-249-430-11	CARBON	12K	5%	1/4W
RV41	1-228-989-00	RES, ADJ, CARBON 470			
RV42	1-230-500-11	RES, ADJ, CARBON 220K			
RV61	1-228-989-00	RES, ADJ, CARBON 470			
RV62	1-230-500-11	RES, ADJ, CARBON 220K			
RV101	1-238-016-11	RES, ADJ, CARBON 10K			
RV201	1-238-016-11	RES, ADJ, CARBON 10K			
RY81	1-515-614-11	RELAY			
S11	1-571-281-21	SWITCH, LEAF (HALF)			
S12	1-571-281-21	SWITCH, LEAF (REC (A))			
S13	1-571-281-21	SWITCH, LEAF (REC (B))			
S14	1-571-281-21	SWITCH, LEAF (CrO_2)			
S801	1-554-303-21	SWITCH, KEY BOARD (□)			
S802	1-554-303-21	SWITCH, KEY BOARD (▮▮)			
S803	1-554-303-21	SWITCH, KEY BOARD (▷)			
S804	1-554-303-21	SWITCH, KEY BOARD (◁)			
S805	1-554-303-21	SWITCH, KEY BOARD (○)			
S806	1-554-303-21	SWITCH, KEY BOARD (◀◀)			
S807	1-554-303-21	SWITCH, KEY BOARD (▶▶)			
S808	1-554-303-21	SWITCH, KEY BOARD (●)			
S809	1-570-157-21	SWITCH, SLIDE (DIRECTION MODE)			
S810	1-571-908-11	SWITCH, SLIDE (DOLBY NR)			
SPK101	1-235-186-00	ENCAPSULATED COMPONENT			

ST-H300

SERVICE MANUAL

AEP Model
UK Model



This set is the tuner section in MHC-3500.

SPECIFICATIONS

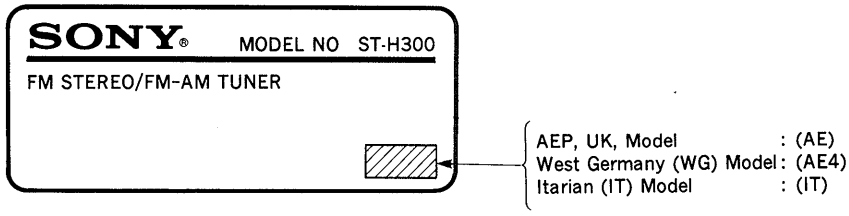
System	FM stereo, FM/AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 – 108 MHz
Antenna	Telescopic antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	MW: 522 – 1,611 kHz, LW 144 – 288 kHz (Italian model) MW: 531 – 1,602 kHz, LW: 153 – 279 kHz (except Italian model)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

FM-AM TIMER TUNER

SONY®

MODEL IDENTIFICATION

—Model Number Label—



- **Power supply for service**

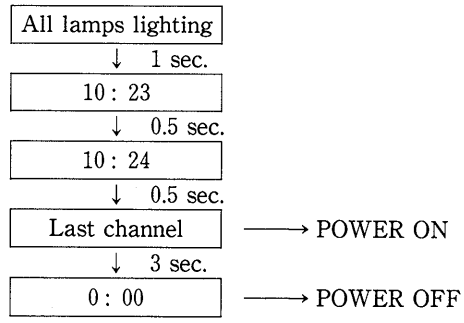
Since this machine has no power source in itself, the power is supplied form AMP TA-H300 used for this series. As shown in the following table, this machine requires 4types of voltage, and supplying each type of voltage separately makes complicated connections.

Accordingly, make connection with TA-H300 at time of service, such as electrifying repair.

AC 3.9V	FL-tube filament voltage
DC −24V	Display controller IC701, grid voltage
DC 5V	Display controller IC701, V_{CC}
DC 13V	PLL control voltage

- **Service mode for checking the timer ON/OFF**

1) Connect with AMP TA-H300 and set the power switch of TA-H300 to the state of STANDBY.
2) Set the time of tuner to a proper time (any time).
3) Press 3 switches simultaneously, namely, TUNING −, SHIFT and ENTER.
4) FL-tube display



5) End

—Caution for Service—

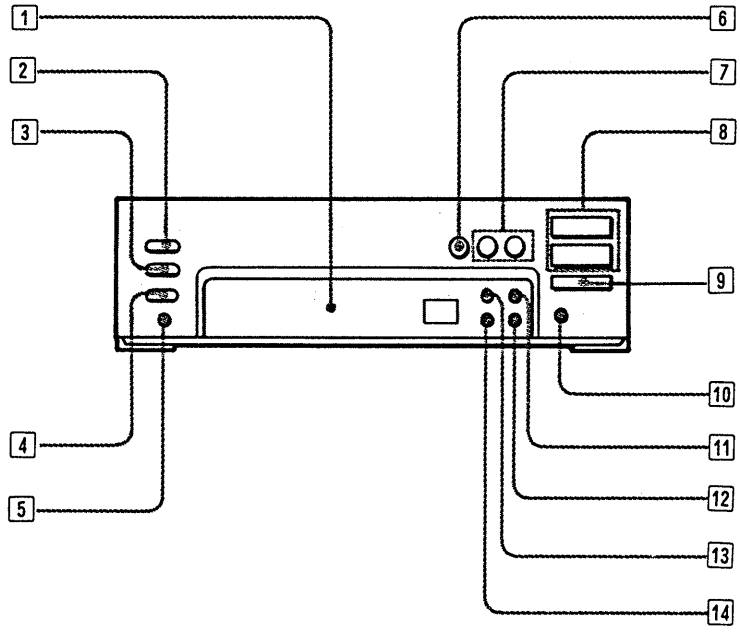
- **Reset of IC701**

The display controller IC701 is reset by short-circuiting both edges of C702 (0.47μF) while power OFF and discharging electricity.
After resetting, the following frequencies are pre-set to the memory.
When the repair is completed, return the memory to the preceding state (content).

FM		AM/MW				LW			
		AEP, UK modol		WG, Italian model		AEP, UK model		WG, Italian model	
A1	87.5 MHz	A6	531 kHz	A6	522 kHz	B1	153 kHz	B1	144 kHz
A2	88.0 MHz	A7	603 kHz	A7	603 kHz	B2	171 kHz	B2	162 kHz
A3	98.0 MHz	A8	999 kHz	A8	999 kHz	B3	216 kHz	B3	216 kHz
A4	100.0 MHz	A9	1404 kHz	A9	1404 kHz	B4	261 kHz	B4	270 kHz
A5	108.0 MHz	A0	1602 kHz	A0	1611 kHz	B5	281 kHz	B5	288 kHz

SECTION 1
GENERAL

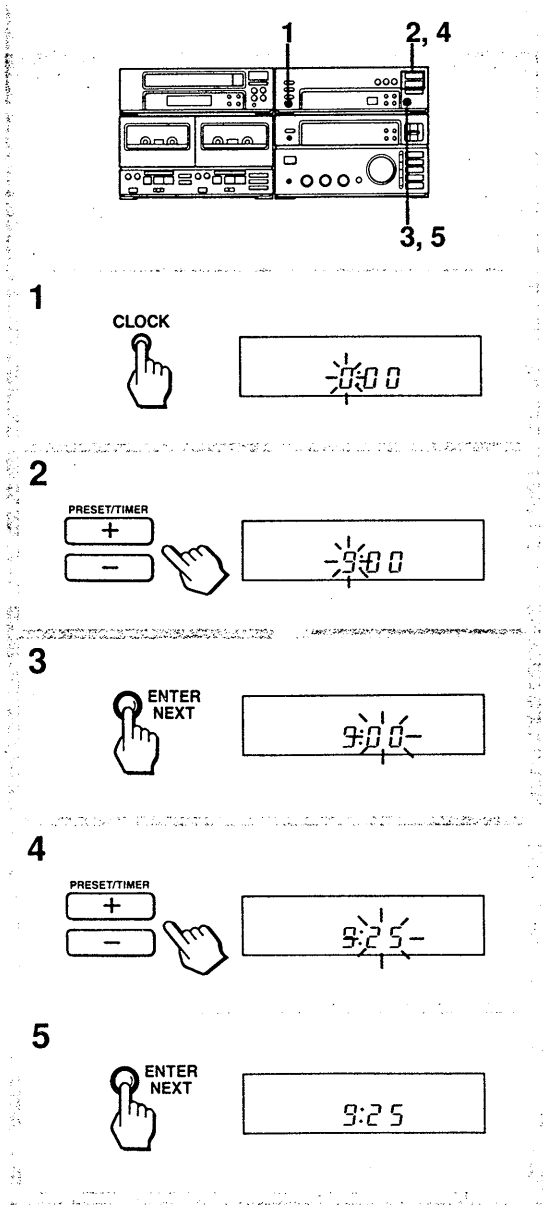
1-1. PARTS IDENTIFICATION



Tuner Section

1. Display window
2. TIMER CONTROL button
3. SLEEP timer button
4. TIMER SET button
5. CLOCK button
6. BAND selector
7. TUNING/–/+ buttons
8. PRESET/TIMER –/+ buttons.
9. SHIFT (memory page select) button
10. ENTER/NEXT button
11. STEREO/MUTING button
12. MEMORY button
13. AUTO/MANUAL tuning button
14. TIME/FREQUENCY button
15. Remote control sensor

1-2. CLOCK SETTING



Setting the Clock

Example: Set to 9:25 in the morning.

1 **Press CLOCK.**

2 **Set the hour with PRESET/TIMER +/- buttons**

3 **Press ENTER/NEXT.**

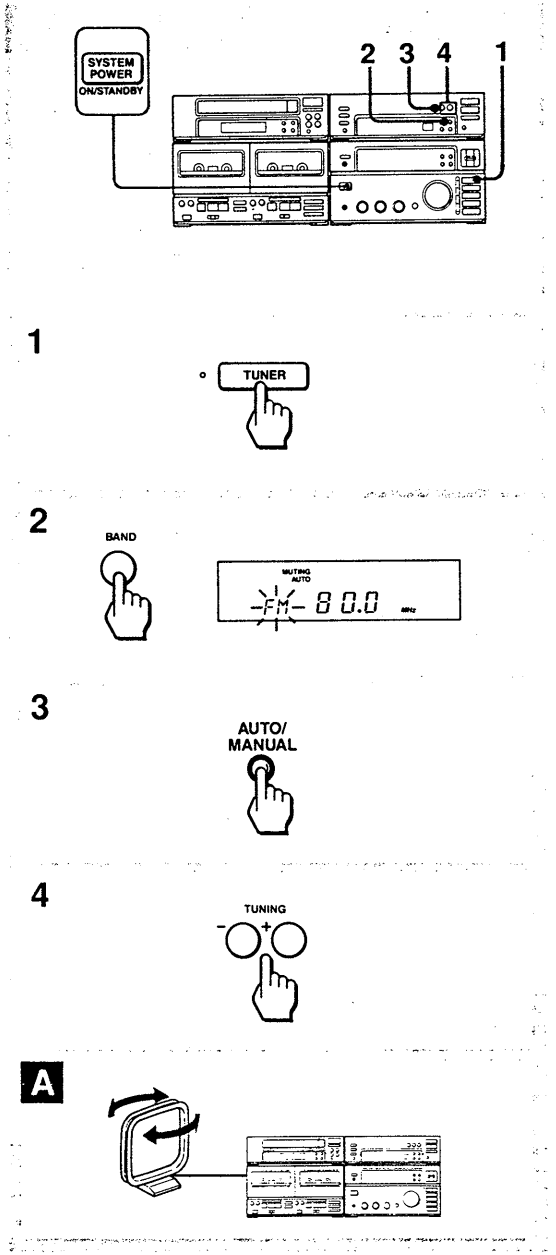
4 **Set the minute with PRESET/TIMER +/– buttons.**

5 **Press ENTER/NEXT.**
The clock starts operating.

When a power interruption occurs
The time will blink and the clock will be behind by the length of time of the power interruption. After the power is restored, the display must be reset to the proper time. (Timer setting is not cancelled by power interruption.)

To change the frequency display into the time display
Press TIME/FREQUENCY. Each time you press TIME/FREQUENCY, the display changes.

1-3. RADIO



The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

Tuning in Automatically

1 **Press TUNER.**

2 **Press BAND repeatedly until the desired band appears.**
As you press BAND, the band changes as follows: FM → MW → LW

3 **Press AUTO/MANUAL.**
Make sure that AUTO appears in the display.

4 **Tune in to the station with TUNING + or –.**

5 **For receiving FM stations with the stereo effect, press STEREO/MUTING so that MUTING appears.**

Tuning in Manually

1 **Press TUNER.**

2 **Select band by pressing BAND.**

3 **Press AUTO/MANUAL so that AUTO disappears from the display.**

4 **Tune in to the station with TUNING + or –.**

Indicator on the display

TUNED: Appears when a station of sufficient signal strength is tuned in.
STEREO: Appears when an FM stereo program of sufficient signal strength is received.

When an FM stereo program is noisy or hard to receive

Press STEREO/MUTING so that MUTING disappears from the display.
There will be no stereo effect, but the reception will be improved. Press again to restore the stereo effect.

Antenna adjustment A

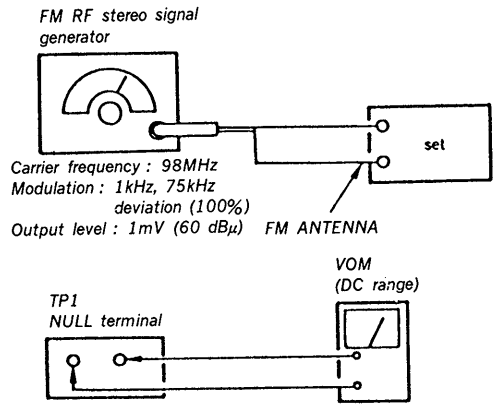
For MW and LW reception, find the best location for the AM loop antenna.

SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

• FM Discriminator Alignment (NULL check)

Setting :



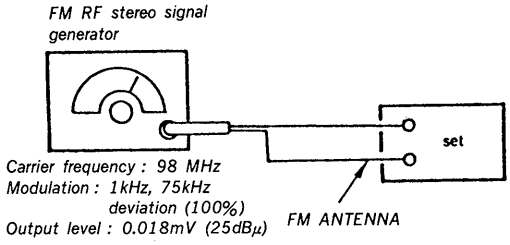
Procedure :

1. Tune the set to 98 MHz.
2. Adjust T21 for 0 V reading on the VOM.

Note : FM TUNING LEVEL adjustment should be made after FM discriminator alignment.

• FM TUNING LEVEL Adjustment

Setting :

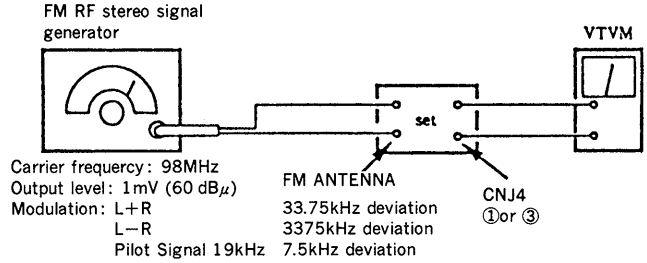

FM RF stereo signal generator
set
Carrier frequency : 98 MHz
Modulation : 1kHz, 75kHz deviation (100%)
Output level : 0.018mV (25dBμ)
FM ANTENNA

Procedure :

1. Tune the set to 98 MHz.
2. Adjust RV24 so that the TUNED LED goes on.

• FM Stereo Separation Adjustment

Setting :



Procedure :

Tune the set to 98 MHz

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

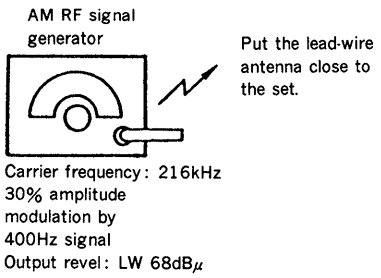
L-CH Stereo separation : Ⓐ—Ⓑ
R-CH Stereo separation : Ⓒ—Ⓓ

The separations of both channels should be equal.

AM SECTION

• AM TUNING LEVEL Adjustment

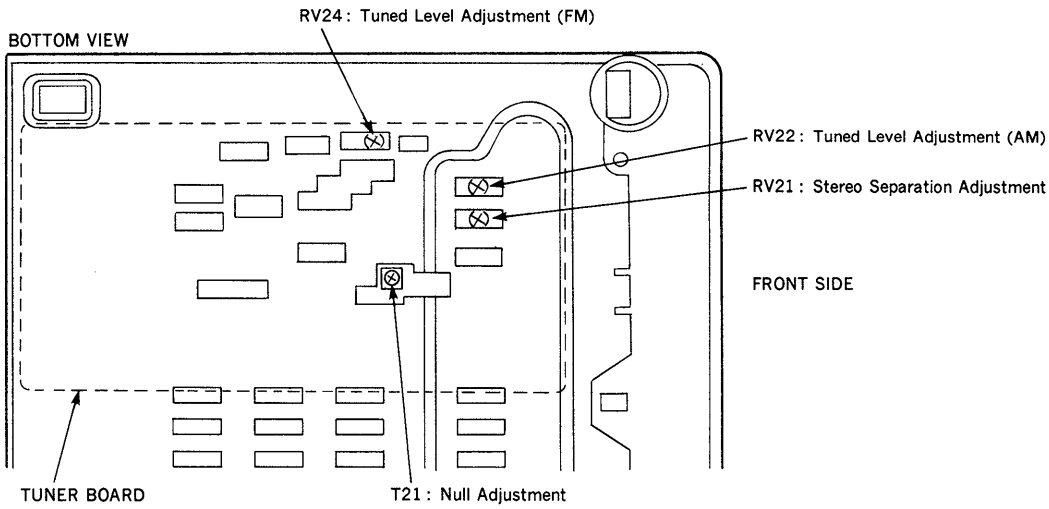
Setting :


AM RF signal generator
Put the lead-wire antenna close to the set.
Carrier frequency : 216kHz
30% amplitude modulation by 400Hz signal
Output revel : LW 68dBμ

Procedure :

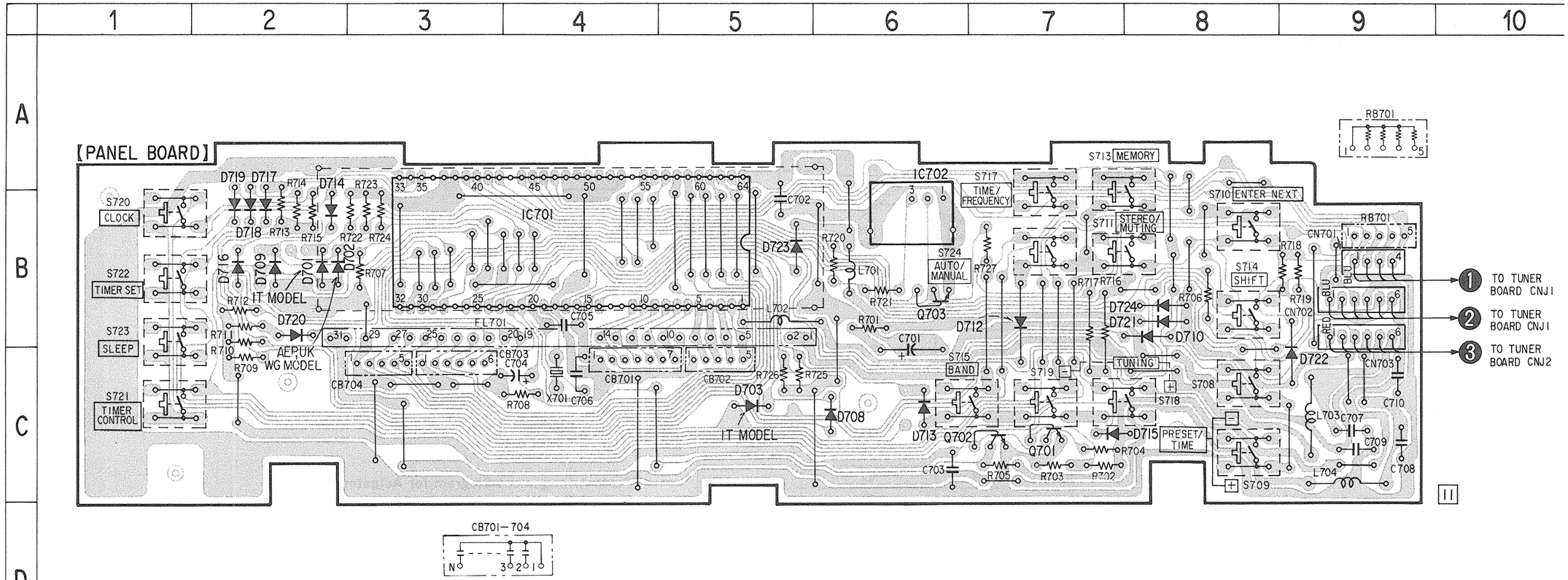
1. Tune the set to 216 kHz.
2. Adjust the RV22 so that the TUNED LED goes on.

[Parts Arrangement Diagram for Adjustments]



SECTION 3
DIAGRAMS

3-1. PRINTED WIRING BOARD—PANEL SECTION—



• Semiconductor Location

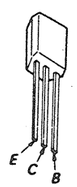
Ref. No.	Location
D701	B-2
D702	B-2
D703	C-5
D708	C-6
D709	B-2
D710	B-8
D712	B-7
D713	C-6
D714	B-2
D715	C-6
D716	B-2
D717	B-2
D718	B-2
D719	B-2
D720	B-2
D721	B-8
D722	C-9
D723	B-5
D724	B-8
IC701	B-4
IC702	B-6
Q701	C-1
Q702	C-7
Q703	B-6

Note:

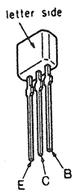
- ○—— : parts extracted from the component side.
- WG: West Germany Model
- IT: Itarian Model

3-2. SEMICONDUCTOR LEAD LAYOUTS

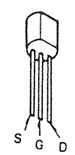
DTA114ES
DTC114ES
DTC144ES
2SC1317-SU
2SC2669-0Y
2SC3113-AB
2SC3330-T



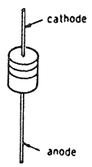
2SC2785-HFE



2SK246-GR3

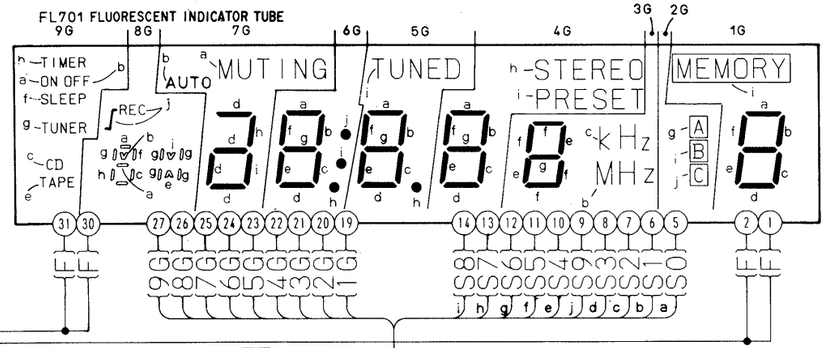


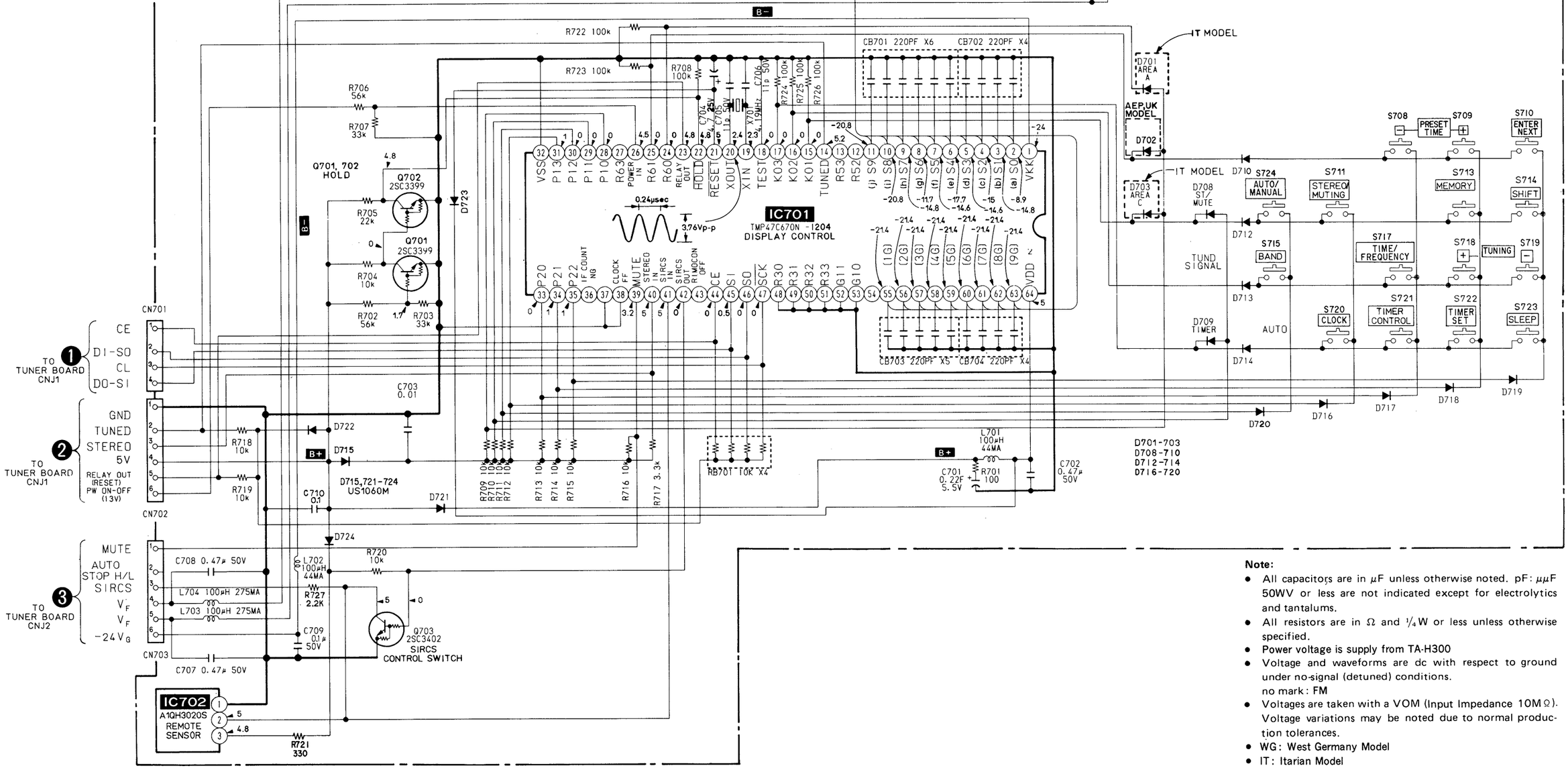
1SS120



【PANEL BOARD】

FL701 FLUORESCENT INDICATOR TUBE



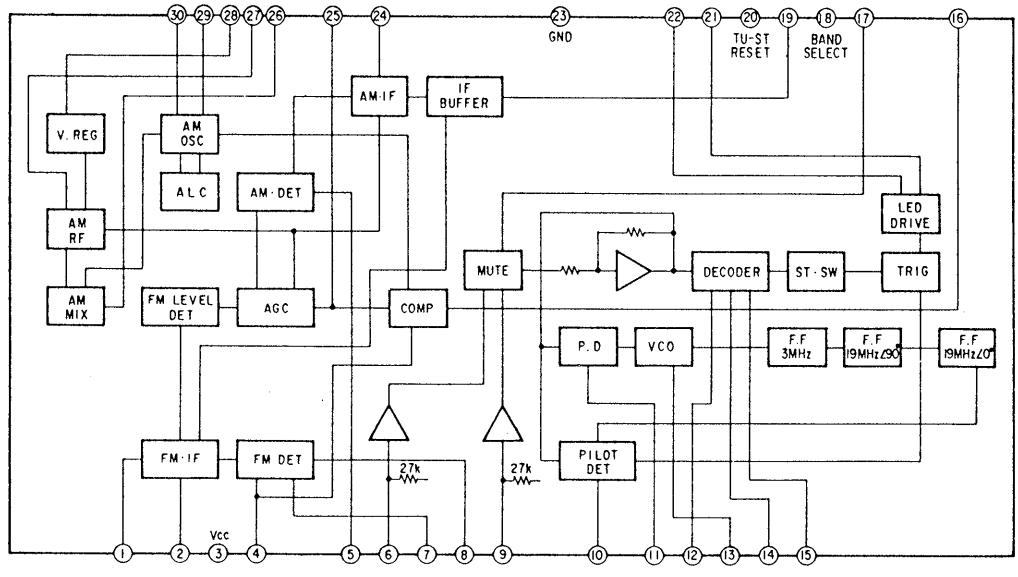


Note:

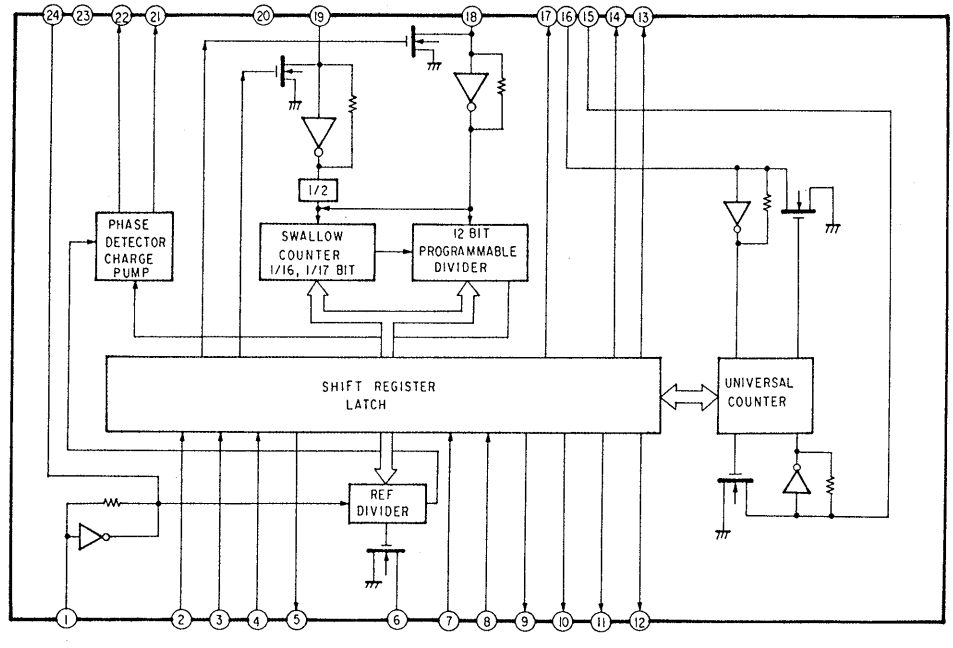
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Power voltage is supply from TA-H300
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- WG: West Germany Model
- IT: Itarian Model

• IC Block Diagrams

IC21 LA1858N

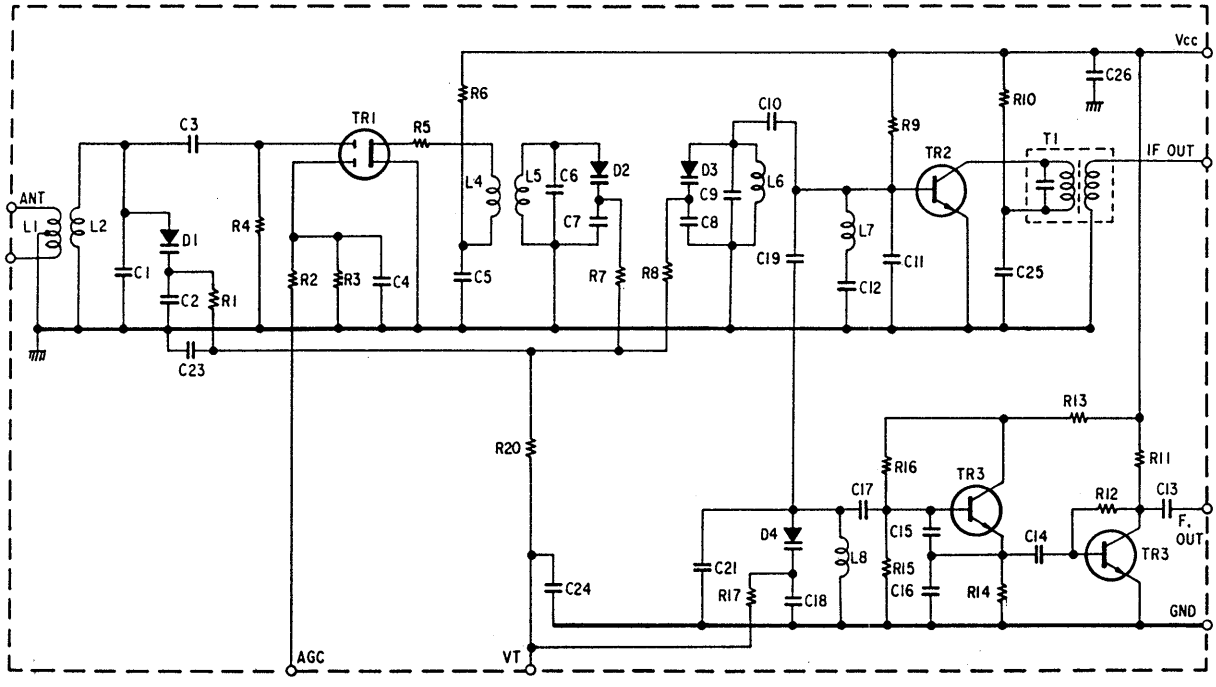


IC81 LC7218

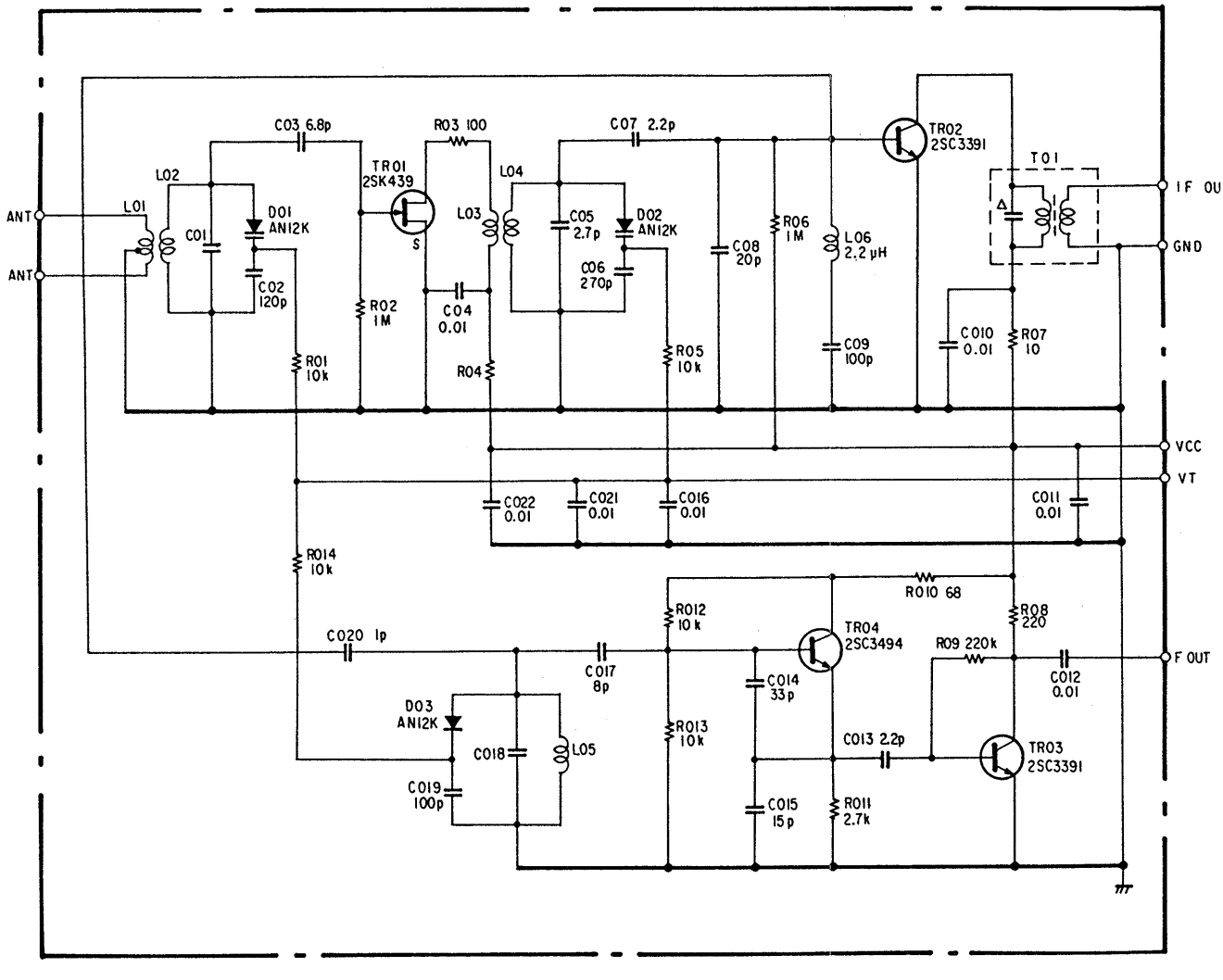


3-4. FM FRONT-END SCHEMATIC DIAGRAMS

FE1 (WG, IT Model)

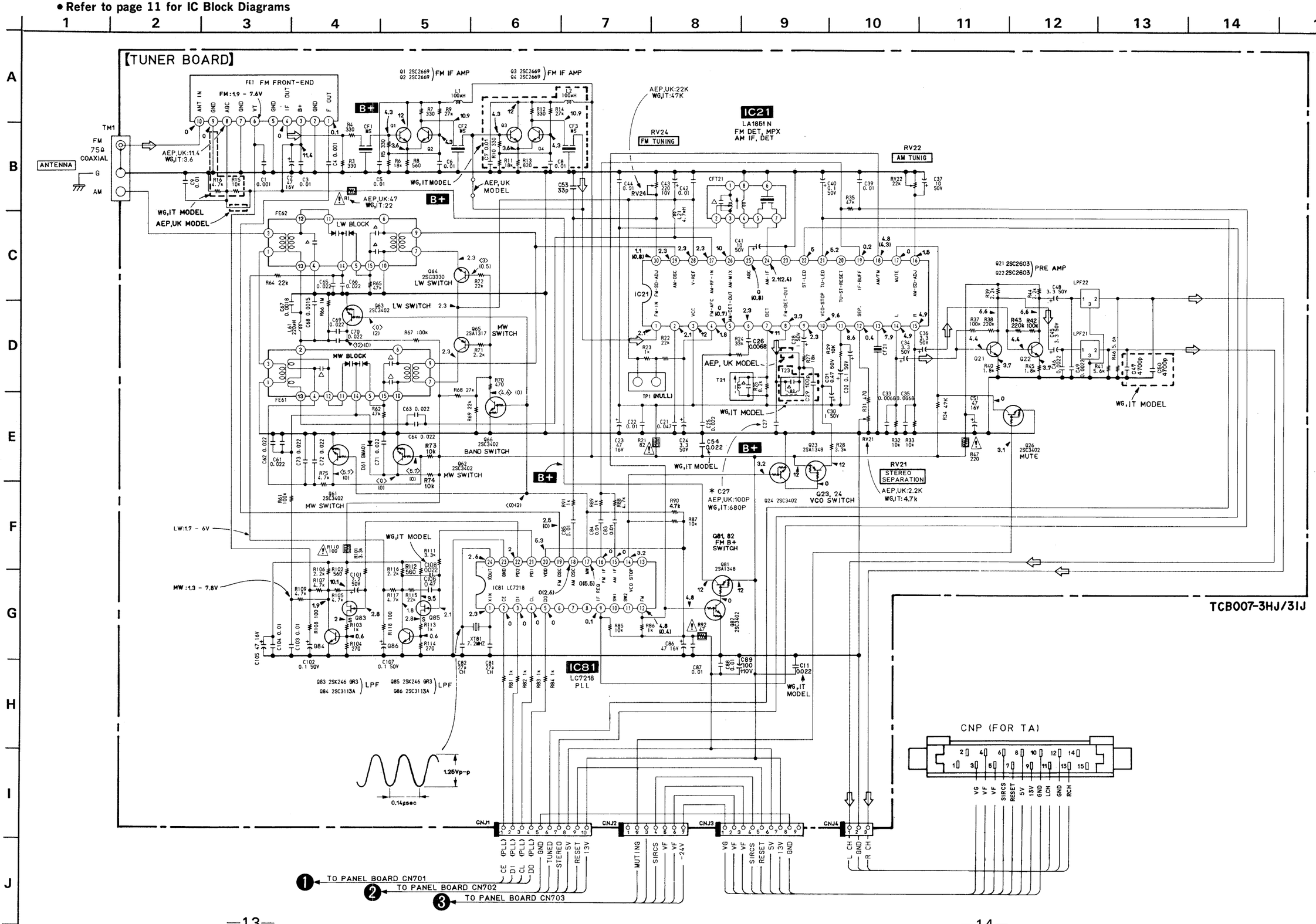


FE1 (AEP, UK Model)

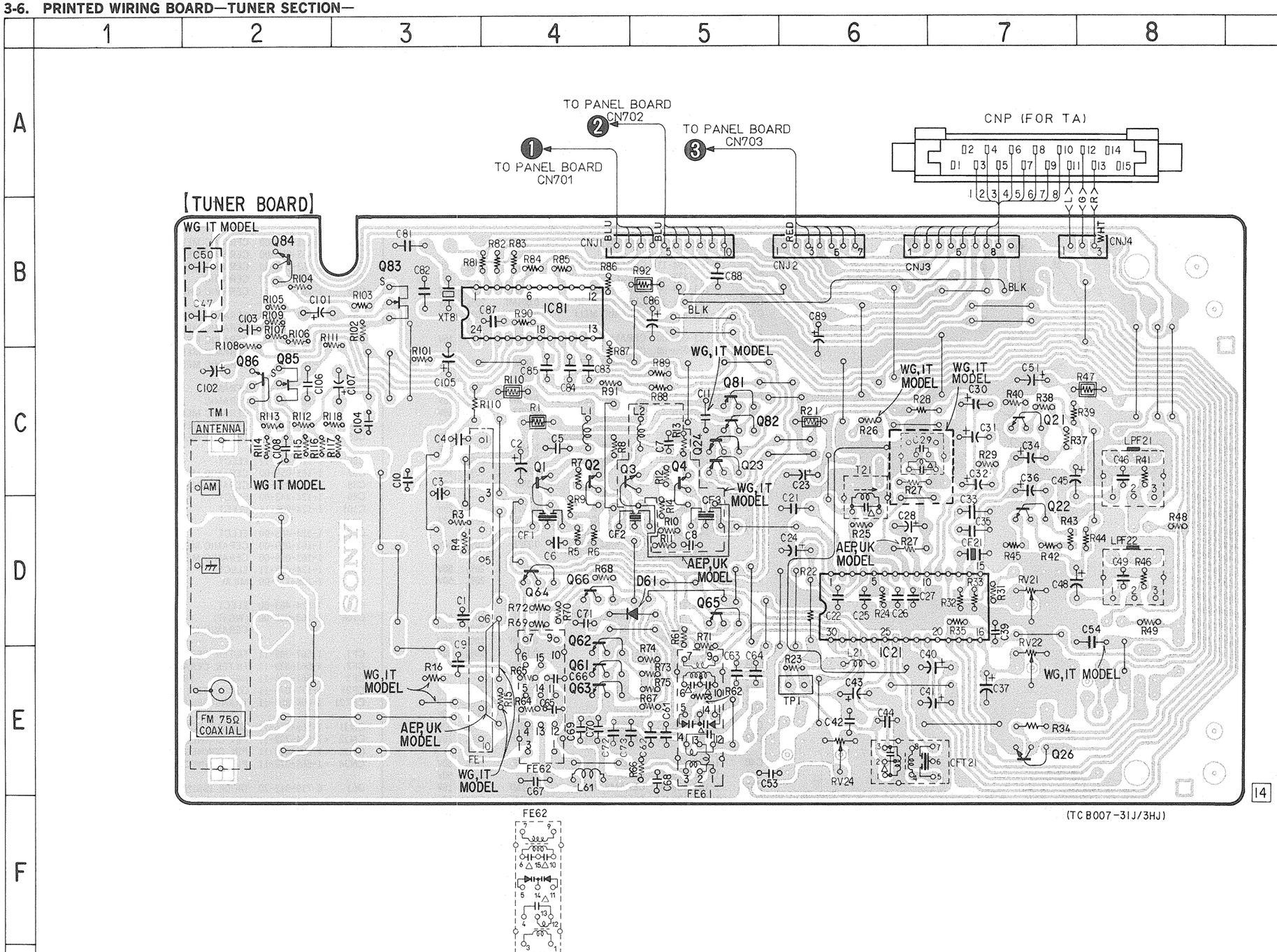


3-5. SCHEMATIC DIAGRAM—TUNER SECTION—

• Refer to page 11 for IC Block Diagrams



3-6. PRINTED WIRING BOARD—TUNER SECTION—



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• **Semiconductor Location**

Ref. No.	Location
D61	D-5
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-4
Q3	C-5
Q4	C-5
Q21	C-7
Q22	D-7
Q23	C-5
Q24	C-5
Q26	E-7
Q61	E-4
Q62	E-4
Q63	E-4
Q64	D-4
Q65	D-5
Q66	D-4
Q81	C-5
Q82	C-5
Q83	B-3
Q84	B-2
Q85	C-2
Q86	C-2

Note:

- ○—— : parts extracted from the component side.
- [ ]— indicates side identified with part number.
- WG: West Germany Model
- IT: Itarian Model

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- ▭ : adjustment for repair.
- Power voltage is supply from TA-H300
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
  < >: LW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
- WG: West Germany Model
- IT: Itarian Model

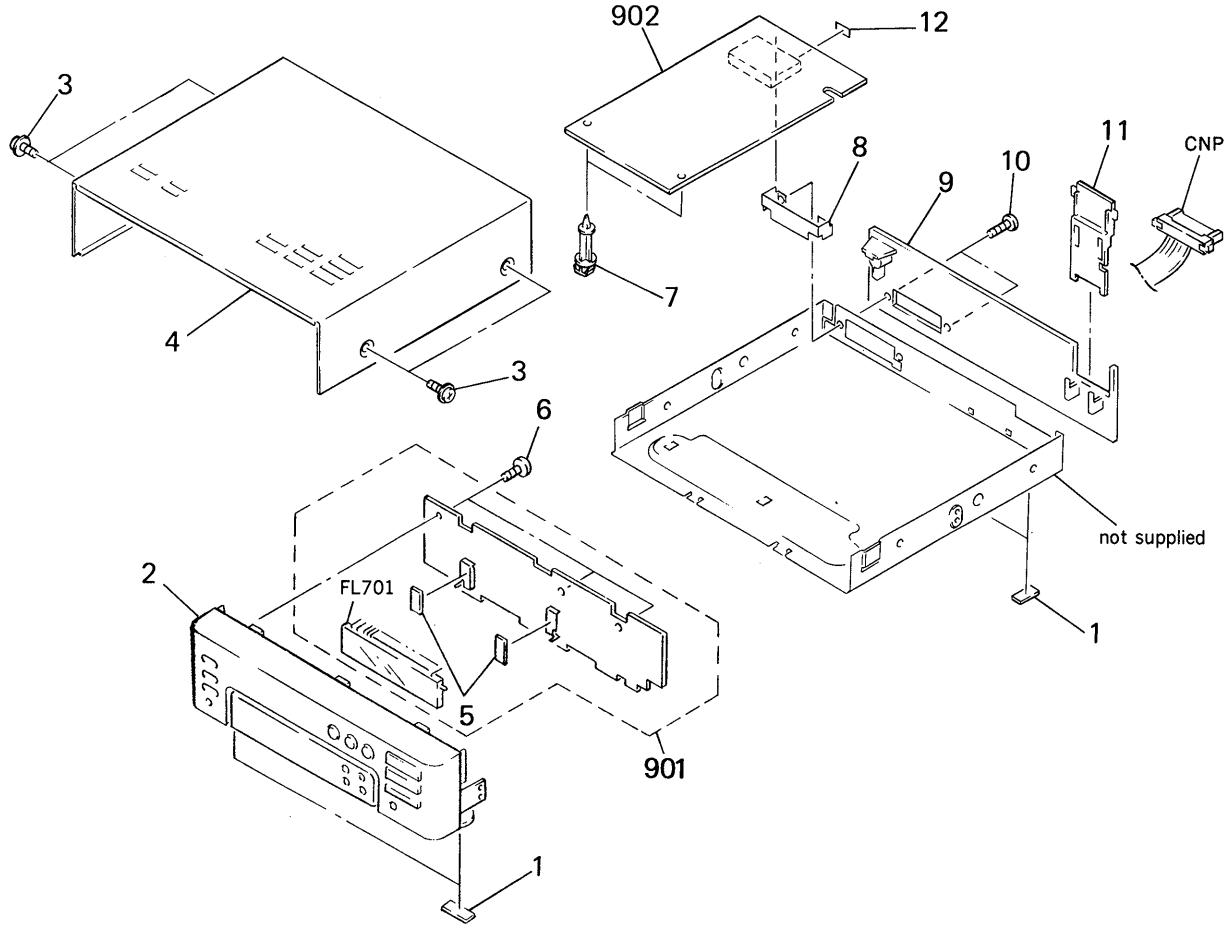
SECTION 4
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- WG: West Germany Model
- IT: Itarian Model



Ref.No	Part No.	Description	Remarks
1	4-930-336-01	FOOT (FELT)	
2	X-4930-316-1	PANEL ASSY (EX), FRONT	
3	3-704-366-01	SCREW (CASE) (M3X8)	
4	4-932-844-11	CASE	
5	4-932-810-01	CUSHION (FL)	
6	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
7	*4-914-008-01	HOLDER, PCB	
8	*4-924-988-11	PLATE(ST), GROUND	
9	*4-930-346-01	PANEL (ST), BACK	
10	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
11	*4-930-344-01	HOLDER (CONNECTION CORD)	
12	*4-612-009-01	(WG, IT)....SPACER (A)	
901	A-4334-654-A	(IT)....MOUNTED PCB, PANEL	
901	*A-4334-653-A	(AEP, UK, WG)....MOUNTED PCB, PANEL	
902	*A-4303-187-A	(AEP, UK)....MOUNTED PCB, TUNER (TCB007-3HJ)	
902	*A-4303-188-A	(WG, IT)....MOUNTED PCB, TUNER (TCB007-3IJ)	
CNP	1-575-679-11	CORD (WITH CONNECTOR)	
FL701	1-517-587-11	INDICATOR TUBE, FLUORESCENT	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA..., UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- WG: West Germany Model
- IT: Itarian Model

TUNER

Ref.No	Part No.	Description			
		CAPACITOR			
C1	1-162-294-11	CERAMIC CHIP	0.001MF	20%	25V
C2	1-124-477-11	ELECT	47MF	20%	16V
C3	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C4	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C5	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C6	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C7	1-163-059-00	(WG,IT)....			
		CERAMIC MELF	0.01MF	20%	16V
C8	1-163-059-00	(WG, IT)....			
		CERAMIC MELF	0.01MF	20%	16V
C9	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C10	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
C11	1-101-005-00	(WG,IT)....CERAMIC	0.022MF		50V
C21	1-101-006-00	CERAMIC	0.047MF		50V
C22	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C23	1-124-477-11	ELECT	47MF	20%	16V
C24	1-123-382-00	ELECT	3.3MF	20%	50V
C25	1-163-063-00	CERAMIC MELF	0.022MF		25V
C26	1-163-019-00	CERAMIC CHIP	0.0068MF	20%	12V
C27	1-162-516-11	(AEP,UK)....			
		CERAMIC CHIP	100PF	10%	50V
C27	1-163-007-11	(WG,IT)....			
		CERAMIC CHIP	680PF	20%	50V
C28	1-124-791-11	ELECT	1.0MF	20%	50V
C29	1-162-516-11	(WG,IT)....			
		CERAMIC CHIP	100PF	10%	50V
C30	1-124-791-11	ELECT	1.0MF	20%	50V
C31	1-124-902-00	ELECT	0.47MF	20%	50V
C32	1-124-463-00	ELECT	0.1MF	20%	50V
C33	1-130-481-00	FILM	0.0068MF	5%	50V
C34	1-123-382-00	ELECT	3.3MF	20%	50V
C35	1-130-481-00	FILM	0.0068MF	5%	50V
C36	1-123-382-00	ELECT	3.3MF	20%	50V
C37	1-123-875-11	ELECT	10MF	20%	50V
C39	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C40	1-124-463-00	ELECT	0.1MF	20%	50V
C41	1-123-875-11	ELECT	10MF	20%	50V
C42	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C43	1-126-176-11	ELECT	220MF	20%	10V
C44	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C45	1-123-382-00	ELECT	3.3MF	20%	50V
C46	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C47	1-163-170-00	(WG,IT)....			
		CERAMIC CHIP	0.0047MF	20%	25V
C48	1-123-382-00	ELECT	3.3MF	20%	50V
C49	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C50	1-163-170-00	(WG,IT)....			
		CERAMIC CHIP	0.0047MF	20%	25V
C51	1-124-477-11	ELECT	47MF	20%	16V
C53	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C54	1-101-005-00	(WG,IT)....CERAMIC	0.022MF		50V
C61	1-163-063-00	CERAMIC MELF	0.022MF		25V
C62	1-163-063-00	CERAMIC MELF	0.022MF		25V
C63	1-163-063-00	CERAMIC MELF	0.022MF		25V
C64	1-163-063-00	CERAMIC MELF	0.022MF		25V
C65	1-163-063-00	CERAMIC MELF	0.022MF		25V
C66	1-163-063-00	CERAMIC MELF	0.022MF		25V
C67	1-102-120-00	CERAMIC	0.0018MF	10%	50V
C68	1-163-111-11	CERAMIC CHIP	0.0015MF	20%	25V
C69	1-163-063-00	CERAMIC MELF	0.022MF		25V
C70	1-163-063-00	CERAMIC MELF	0.022MF		25V
C71	1-163-063-00	CERAMIC MELF	0.022MF		25V
C72	1-163-063-00	CERAMIC MELF	0.022MF		25V
C73	1-163-063-00	CERAMIC MELF	0.022MF		25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V
C83	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C84	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C85	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C86	1-124-477-11	ELECT	47MF	20%	16V
C87	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C88	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C89	1-124-443-00	ELECT	100MF	20%	10V
C101	1-124-925-11	ELECT	2.2MF	20%	50V
C102	1-124-463-00	ELECT	0.1MF	20%	50V
C103	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C104	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C105	1-124-477-11	ELECT	47MF	20%	16V
C106	1-136-173-00	MILAL	0.47MF	5%	50V
C107	1-124-463-00	ELECT	0.1MF	20%	50V
C108	1-163-063-00	(WG,IT)....			
		CERAMIC MELF	0.022MF		25V
CF1	1-567-389-11	FILTER, CERAMIC			
CF2	1-567-389-11	FILTER, CERAMIC			
CF3	1-567-389-11	(WG,IT)....FILTER,CERAMIC			
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19KHz)			
CFT21	1-404-853-11	TRANSFORMER,IF(CERAMIC FILTER)			
CNJ1	*1-568-276-11	SOCKET, CONNECTOR 10P			
CNJ2	*1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
CNJ3	*1-568-419-11	PIN, CONNECTOR 9P			
CNJ4	*1-568-372-11	PIN, CONNECTOR 3P			
D61	8-719-912-20	DIODE 1SS120			
FE1	1-463-857-11	(WG,IT)....FRONT END (FM)			
FE1	1-463-862-21	(AEP,UK)....FRONT END, FM			
FE61	1-236-462-11	ENCAPSULATED COMPONENT (MW RF)			
FE62	1-236-463-11	ENCAPSULATED COMPONENT (LW RF)			
IC21	8-759-821-45	IC LA1851N			
IC81	8-759-820-91	IC LC7218			
L1	1-410-645-31	MICRO INDUCTOR 100UH			
L2	1-410-645-31	(WG,IT)....MICRO INDUCTOR 100UH			
L21	1-407-500-00	MICRO INDUCTOR 4.7MMH			
L61	1-410-525-11	MICRO INDUCTOR 220UF			
LPF21	1-235-164-00	FILTER, LOW PASS			
LPF22	1-235-164-00	FILTER, LOW PASS			
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY			
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY			

Ref.No	Part No.	Description				
Q3	8-129-230-99	(WG,IT)....TRANSISTOR 2SC2669-OY				
Q4	8-129-230-99	(WG,IT)....TRANSISTOR 2SC2669-OY				
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q23	8-729-900-61	TRANSISTOR DTA114ES				
Q24	8-729-900-80	TRANSISTOR DTC114ES				
Q26	8-729-900-80	TRANSISTOR DTC114ES				
Q61	8-729-900-80	TRANSISTOR DTC114ES				
Q62	8-729-900-80	TRANSISTOR DTC114ES				
Q63	8-729-900-80	TRANSISTOR DTC114ES				
Q64	8-729-820-24	TRANSISTOR 2SC3330-T				
Q65	8-729-820-10	TRANSISTOR 2SA1317-SU				
Q66	8-729-900-80	TRANSISTOR DTC114ES				
Q81	8-729-900-61	TRANSISTOR DTA114ES				
Q82	8-729-900-80	TRANSISTOR DTC114ES				
Q83	8-729-202-67	TRANSISTOR 2SK246GR3				
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB				
Q85	8-729-202-67	TRANSISTOR 2SK246GR3				
Q86	8-729-230-93	TRANSISTOR 2SC3113-AB				

RESISTOR

R1	⚠1-249-397-11	(WG, IT).... CARBON (SMALL)	22	5%	1/4W	F
R1	⚠1-249-401-11	(AEP,UK).... CARBON (SMALL)	47	5%	1/4W	F
R3	1-249-329-11	CARBON MELF	330	5%	1/8W	
R4	1-249-329-11	CARBON MELF	330	5%	1/8W	
R5	1-249-329-11	CARBON MELF	330	5%	1/8W	
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W	
R7	1-249-329-11	CARBON MELF	330	5%	1/8W	
R8	1-249-332-11	CARBON MELF	560	5%	1/8W	
R9	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R10	1-249-329-11	(WG,IT).... CARBON MELF	330	5%	1/8W	
R11	1-249-350-11	(WG,IT).... CARBON MELF	18K	5%	1/8W	
R12	1-249-329-11	(WG,IT).... CARBON MELF	330	5%	1/8W	
R13	1-249-334-11	(WG,IT).... CARBON MELF	820	5%	1/8W	
R14	1-249-352-11	(WG,IT).... CARBON MELF	27K	5%	1/8W	
R15	1-249-347-11	(WG,IT).... CARBON MELF	10K	5%	1/8W	
R16	1-249-343-11	(WG,IT).... CARBON MELF	4.7K	5%	1/8W	
R21	1-249-404-00	CARBON (SMALL)	82	5%	1/4W	F
R22	1-249-433-11	CARBON (SMALL)	22K	5%	1/4W	
R23	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R24	1-249-353-11	CARBON MELF	33K	5%	1/8W	
R25	1-249-346-11	CARBON MELF	8.2K	5%	1/8W	
R26	1-249-340-11	(WG,IT).... CARBON MELF	2.7K	5%	1/8W	
R27	1-249-432-11	CARBON (SMALL)	18K	5%	1/4W	
R28	1-249-423-11	CARBON (SMALL)	3.3K	5%	1/4W	
R29	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R31	1-249-331-11	CARBON MELF	470	5%	1/8W	
R32	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R33	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R34	1-249-437-11	CARBON (SMALL)	47K	5%	1/4W	
R35	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R37	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R38	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R39	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R40	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R41	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R42	1-249-359-11	CARBON MELF	100K	5%	1/8W	

Ref.No	Part No.	Description				
R43	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R44	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R45	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R46	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R47	⚠1-249-409-11	CARBON (SMALL)	220	5%	1/4W	F
R48	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R49	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R62	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R64	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R65	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R66	1-215-493-00	CARBON MELF	1M	5%	1/5W	
R67	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R68	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R69	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R70	1-249-331-11	CARBON MELF	470	5%	1/8W	
R71	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R72	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R73	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R74	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R75	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R81	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R82	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R83	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R84	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R85	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R86	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R88	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R89	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R90	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R91	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R92	⚠1-249-401-11	CARBON (SMALL)	47	5%	1/4W	F
R101	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R102	1-249-332-11	CARBON MELF	560	5%	1/8W	
R103	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R104	1-249-328-11	CARBON MELF	270	5%	1/8W	
R105	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R106	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R107	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R108	1-249-323-11	CARBON MELF	100	5%	1/8W	
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R110	⚠1-249-405-11	CARBON (SMALL)	100	5%	1/4W	F
R111	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R112	1-249-332-11	CARBON MELF	560	5%	1/8W	
R113	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R114	1-249-328-11	CARBON MELF	270	5%	1/8W	
R115	1-249-351-11	CARBON MELF	22K	5%	1/8W	
R116	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R117	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R118	1-249-323-11	CARBON MELF	100	5%	1/8W	

RV21	1-238-013-11	(AEP,UK)....RES, ADJ, CARBON 2.2K
RV21	1-238-015-11	(WG,IT)....RES, ADJ, CARBON 4.7K
RV22	1-238-017-11	RES, ADJ, CARBON 22K
RV24	1-238-017-11	(AEP,UK)....RES, ADJ, CARBON 22K
RV24	1-238-019-11	(WG,IT)....RES, ADJ, CARBON 47K
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR
T23	1-236-465-11	(WG,IT)....ENCAPSULATED COMPONENT
TM1	*1-537-138-31	TERMINAL BOARD (ANTENNA)
TP1	*1-560-060-00	PIN, CONNECTOR 2P
XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

EXCEPT FOR TUNER

Ref.No	Part No.	Description
901	A-4334-654-A	(IT)....MOUNTED PCB, PANEL
901	*A-4334-653-A	(AEP, UK, WG)....MOUNTED PCB, PANEL
902	*A-4303-187-A	(AEP,UK)....MOUNTED PCB, TUNER (TCB007-3HJ)
902	*A-4303-188-A	(WG, IT)....MOUNTED PCB, TUNER (TCB007-3IJ)

CAPACITOR

C701	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C702	1-136-173-00	FILM	0.47MF	5%	50V
C703	1-162-306-11	CERAMIC	0.01MF	20%	16V
C704	1-126-094-11	ELECT	4.7MF	20%	25V
C705	1-162-200-31	CERAMIC	11PF	5%	50V
C706	1-162-200-31	CERAMIC	11PF	5%	50V
C707	1-136-173-00	FILM	0.47MF	5%	50V
C708	1-136-173-00	FILM	0.47MF	5%	50V
C709	1-164-159-11	CERAMIC	0.1MF		50V
C710	1-164-159-11	CERAMIC	0.1MF		50V

CB701	1-233-130-11	COMPOSITION CIRCUIT BLOCK
CB702	1-233-148-11	COMPOSITION CIRCUIT BLOCK
CB703	1-233-187-11	COMPOSITION CIRCUIT BLOCK
CB704	1-233-148-11	COMPOSITION CIRCUIT BLOCK
CN701	*1-568-279-11	SOCKET, CONNECTOR 4P
CN702	*1-568-281-11	SOCKET, CONNECTOR 6P
CN703	*1-568-281-11	SOCKET, CONNECTOR 6P
D701	8-719-912-20	(IT)....DIODE 1SS120
D702	8-719-912-20	(AEP, UK, WG)....DIODE 1SS120
D703	8-719-912-20	(IT)....DIODE 1SS120
D708	8-719-912-20	DIODE 1SS120
D709	8-719-912-20	DIODE 1SS120
D710	8-719-912-20	DIODE 1SS120
D712	8-719-912-20	DIODE 1SS120
D713	8-719-912-20	DIODE 1SS120
D714	8-719-912-20	DIODE 1SS120
D715	8-719-912-20	DIODE 1SS120
D716	8-719-912-20	DIODE 1SS120
D717	8-719-912-20	DIODE 1SS120
D718	8-719-912-20	DIODE 1SS120
D719	8-719-912-20	DIODE 1SS120
D720	8-719-912-20	DIODE 1SS120
D721	8-719-912-20	DIODE 1SS120
D722	8-719-912-20	DIODE 1SS120
D723	8-719-912-20	DIODE 1SS120
D724	8-719-912-20	DIODE 1SS120
FL701	1-519-517-11	INDICATOR TUBE, FLUORESCENT
IC701	8-759-239-79	IC TMP47C670N-1204
IC702	8-749-920-59	IC A1QH3020S
L701	1-410-521-11	INDUCTOR 100UH
L702	1-410-521-11	INDUCTOR 100UH
L703	1-408-080-00	INDUCTOR 100UH
L704	1-408-080-00	INDUCTOR 100UH
Q701	8-729-900-89	TRANSISTOR DTC144ES
Q702	8-729-900-89	TRANSISTOR DTC144ES
Q703	8-729-900-80	TRANSISTOR DTC114ES

Ref.No	Part No.	Description

RESISTOR

R701	1-249-405-11	CARBON	100	5%	1/4W
R702	1-249-438-11	CARBON	56K	5%	1/4W
R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-433-11	CARBON	22K	5%	1/4W
R706	1-249-438-11	CARBON	56K	5%	1/4W
R707	1-249-435-11	CARBON	33K	5%	1/4W
R708	1-249-441-11	CARBON	100K	5%	1/4W
R709	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-249-429-11	CARBON	10K	5%	1/4W
R711	1-249-429-11	CARBON	10K	5%	1/4W
R712	1-249-429-11	CARBON	10K	5%	1/4W
R713	1-249-429-11	CARBON	10K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
R715	1-249-429-11	CARBON	10K	5%	1/4W
R716	1-249-429-11	CARBON	10K	5%	1/4W
R717	1-249-423-11	CARBON	3.3K	5%	1/4W
R718	1-249-429-11	CARBON	10K	5%	1/4W
R719	1-249-429-11	CARBON	10K	5%	1/4W
R720	1-249-429-11	CARBON	10K	5%	1/4W
R721	1-249-411-11	CARBON	330	5%	1/4W
R722	1-249-441-11	CARBON	100K	5%	1/4W
R723	1-249-441-11	CARBON	100K	5%	1/4W
R724	1-249-441-11	CARBON	100K	5%	1/4W
R725	1-249-441-11	CARBON	100K	5%	1/4W
R726	1-249-441-11	CARBON	100K	5%	1/4W
R727	1-249-421-11	CARBON	2.2K	5%	1/4W

RB701	1-233-125-11	COMPOSITION CIRCUIT BLOCK
S708	1-554-596-21	SWITCH, KEY BOARD (PRESET/TIME −)
S709	1-554-596-21	SWITCH, KEY BOARD (PRESET/TIME +)
S710	1-554-596-21	SWITCH, KEY BOARD (ENTER NEXT)
S711	1-554-596-21	SWITCH, KEY BOARD (STEREO/MUTING)
S713	1-554-596-21	SWITCH, KEY BOARD (MEMORY)
S714	1-554-596-21	SWITCH, KEY BOARD (SHIFT)
S715	1-554-596-21	SWITCH, KEY BOARD (BAND)
S717	1-554-596-21	SWITCH, KEY BOARD (TIME/FRQUENCY)
S718	1-554-596-21	SWITCH, KEY BOARD (TUNING +)
S719	1-554-596-21	SWITCH, KEY BOARD (TUNING −)
S720	1-554-596-21	SWITCH, KEY BOARD (CLOCK)
S721	1-554-596-21	SWITCH, KEY BOARD (TIMER CONTROL)
S722	1-554-596-21	SWITCH, KEY BOARD (TIMER SET)
S723	1-554-596-21	SWITCH, KEY BOARD (SLEEP)
S724	1-554-596-21	SWITCH, KEY BOARD (AUTO/MANUAL)
X701	1-567-821-21	VIBRATOR, CRYSTAL (4.19MHz)

9-955-807-21

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Audio Group

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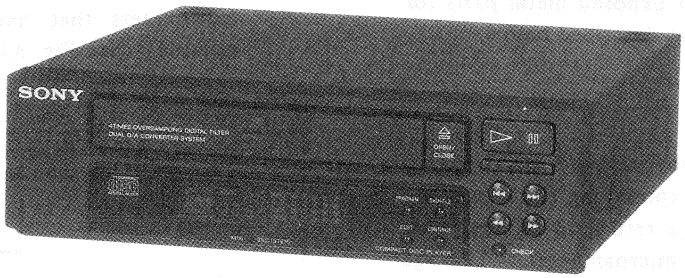
CDP-H300

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model



This set is the CD player section in MHC-2500/3500/FH-E626CD.

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	5 Hz – 20 kHz (+0.5/–2.0 dB)
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	2 V (at 50 kilohms)
Load impedance	Over 10 kilohms
Dimensions	Approx. 225 × 65 × 225 mm (w/h/d) ($9 \times 2^5/_8 \times 9$ inches)
Weight	Approx. 2 kg (4 lb 6 oz)
Power requirement	120V 60Hz } Canadian Model
Power consumption	10W } Canadian Model

Model Name Using Similar Mechanism	HCD-H7/H1500
CD Transport Mechanism Type	CDM13A-5BD3
Optical Pick-Up Block Type	BU-5BD3

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

MICROFILM

COMPACT DISC PLAYER

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

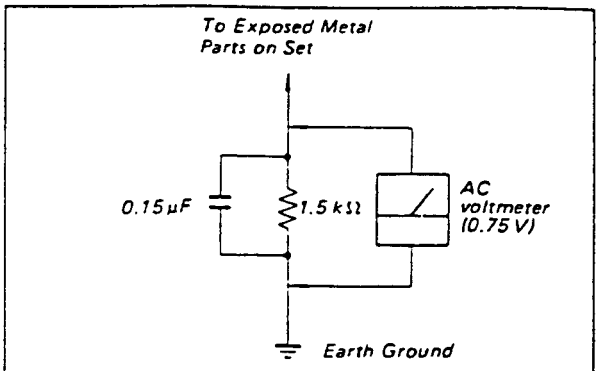


Fig. A. Using an AC voltmeter to check AC leakage.

SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

CAUTION

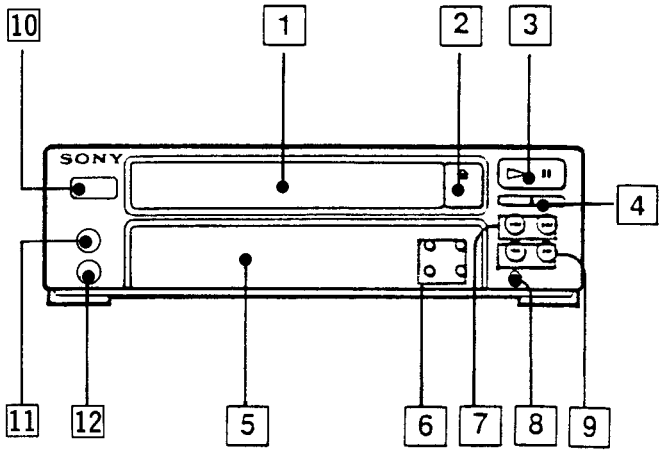
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

SECTION 1
GENERAL

1-1. LOCATION OF CONTROLS

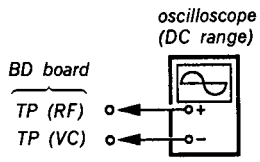


1 Disc compartment
2 ⏏ OPEN/CLOSE button
3 ▷II (play/pause) button
4 ■ (stop) button
5 Display window
6 PLAY mode selectors
PROGRAM button
SHUFFLE button
EDIT button
CONTINUE button
7 ⏮ / ⏭ (Automatic Music Sensor) buttons
8 REPEAT button
9 ◀◀ / ▶▶ (manual search) buttons
10 POWER ON/OFF
11 PHONE LEVEL
12 HEADPHONES
} Canadian model

SECTION 2
ELECTRICAL ADJUSTMENTS

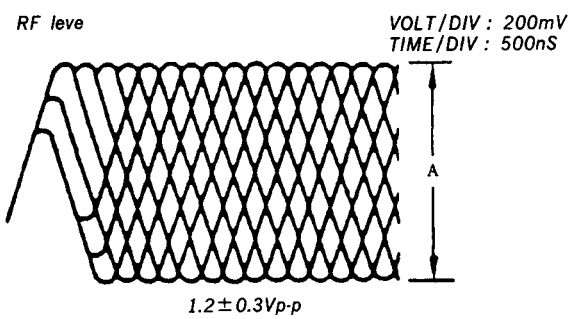
1. Perform adjustments in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.

RF Level Check
Procedure :



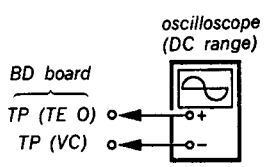
1. Connect oscilloscope to test point TP (RF) and TP (VC) on BD board.
2. Confirm that RF level and eye pattern is optimum.
   Oputimum eye pattern means that shape "◇" can be clearly distinguished at the center of the wave form.

RF signal Reference Waveform (eye pattern)



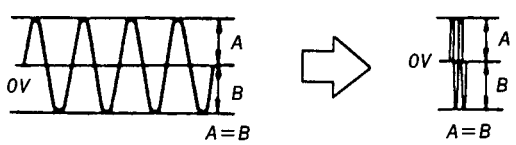
REFERENCE

E-F Balance Check
Procedure :

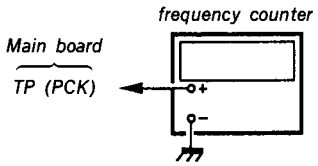


1. Connect test point TP (ADJ) and TP (TES) to ground with lead wire.
2. Connect oscilloscope to test point TP (TE O) and TP (VC) on BD board.
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.
6. After check, remove the lead wire connected in step 1.

Note : Take sweep time as long as possible to obtain best waveform.



RF PLL Free-run Frequency Check
Procedure :



1. Turn POWER switch on.
2. Put disc (YEDS-18) in and playback.
3. Confirm that reading on frequency counter is 4.3218MHz

Focus/Tracking Gain Adjustment

A frequency responce analyzer is necessary in order to perform this adjustment exactly.

However, this gain cas a margin, so even if it is slightly off there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is the point where both are satisfied.

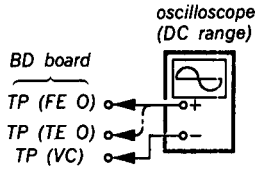
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear

Symptoms \ Gain	Focus	Tracking
• The time until music starts becmes longer for STOP →▷ PLAY or automatic selection. (⏮, ⏭ buttons pressed.) (Normally takes about 1 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP →▷ PLAY or automatic selection. (⏮, ⏭ buttons pressed.)	—	low
• Sound is interrupted during PLAY. Or time counter display stops progressing.	—	low
• More noise during 2-axis device operation.	high	high

The following is a simple adjustment method.

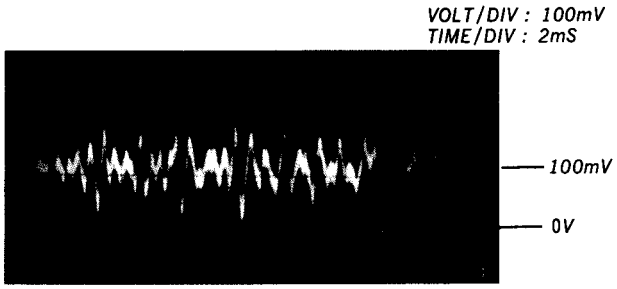
—Primary Adjustment—

Note : Since exact adjustment cannot be performed remember the positions of the controls before performing the adjustment.
If the positions after the primary adjustment are only a little different, returs the controls the original position.

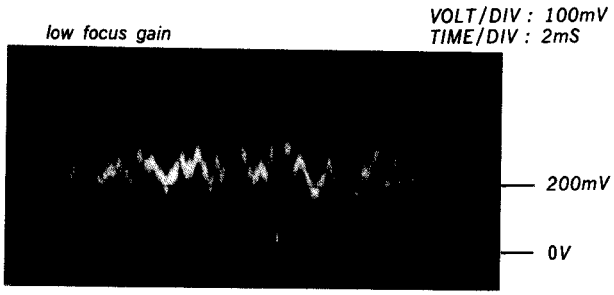


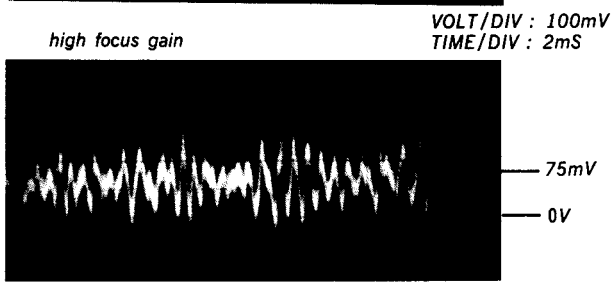
Procedure :

1. Keep the set horizontal.
   If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.
2. Insert disc (YEDS-18) and press ▷ PLAY button.
3. Connect oscilloscope to TP (FEO) and TP (VC) on BD board.
4. Adjustment RV101 on digital board so that the waveform is as shown in the figure below. (focus gain adjustment)

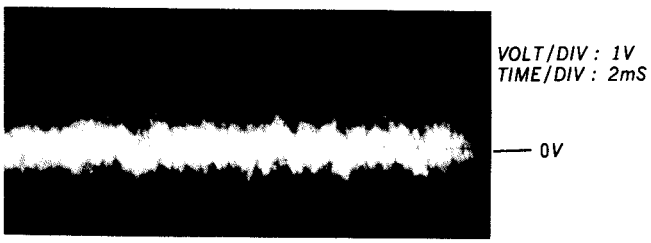


• Incorrent Examples (DC level changes more than on adjusted waveform)

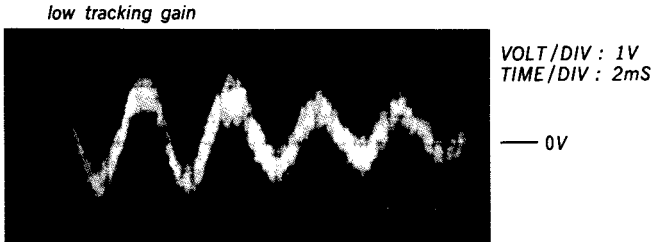


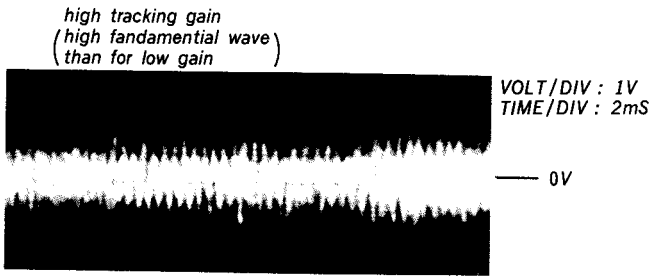


5. Connect oscilloscope to TP (TEO) and TP (VC) on BD board.
6. Adjusted MV102 on digital board so that the waveform is as shown the flgure below. (tracking gain adjustment)



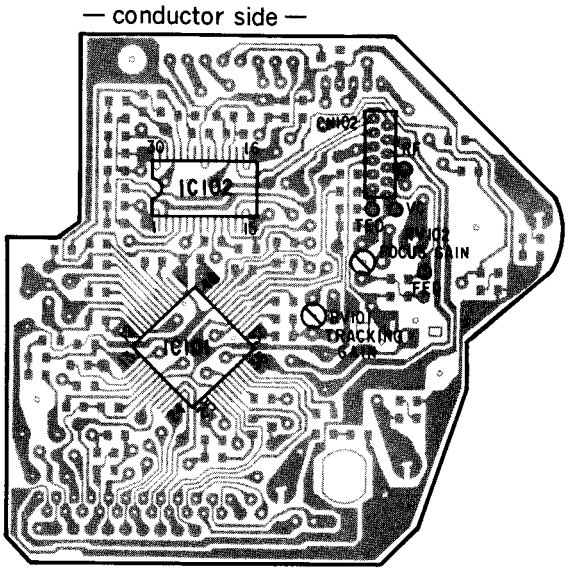
• Incorrect Examples (fundamentia wave appears)



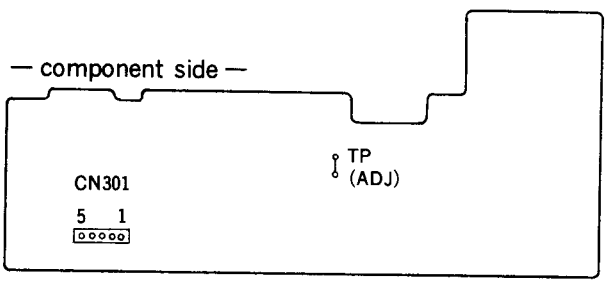


Adjustment Locations :

[BD board]



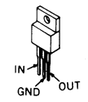
[Main board]



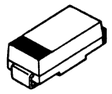
SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

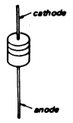
M5F7807



EC10DS2



UZ-4.7BSC
1SS120



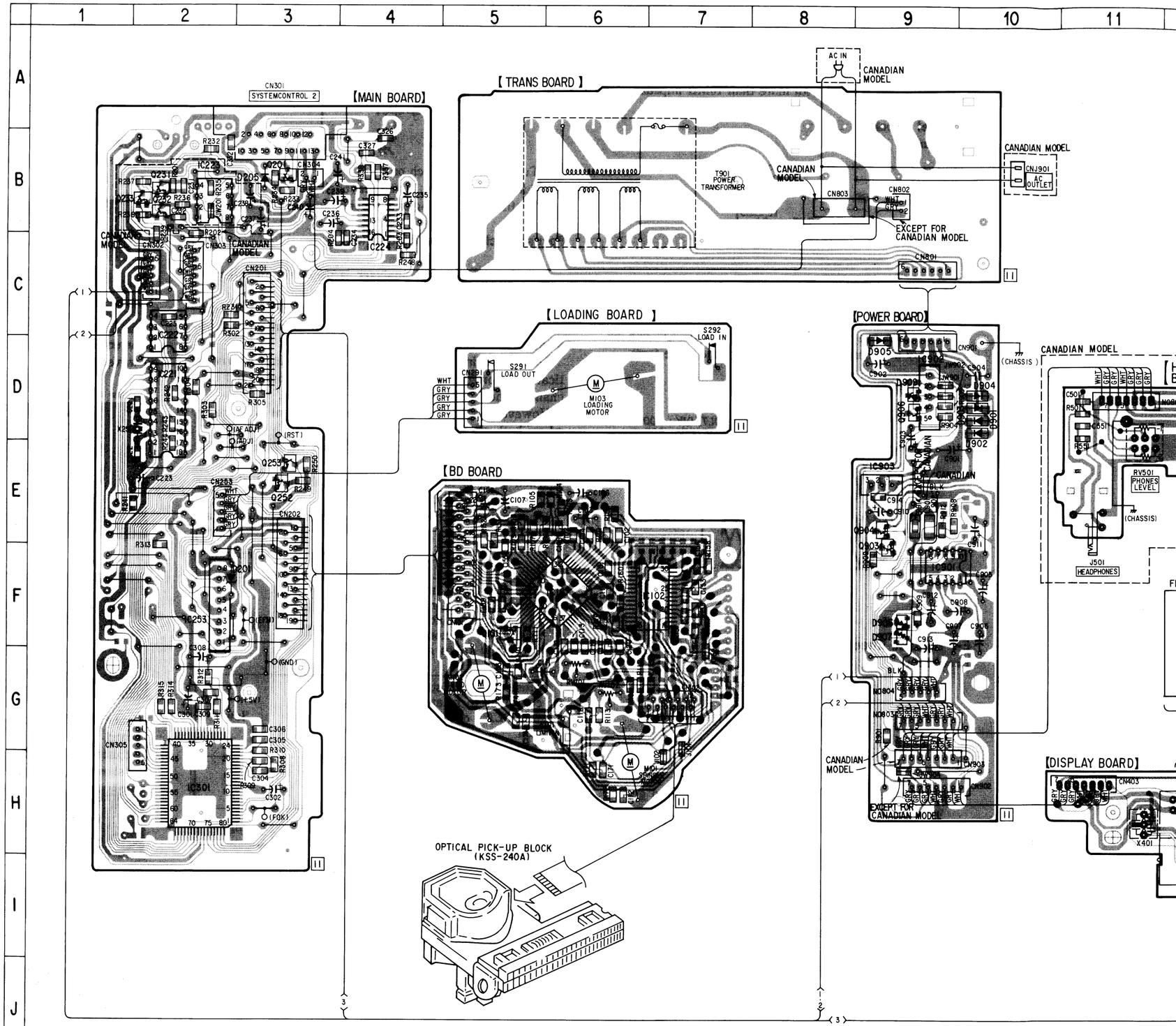
• Semiconductor Location

Ref. No.	Location
D201	F-2
D205	B-3
D401	H-15
D402	H-14
D403	H-16
D404	H-17
D412	H-13
D901	D-10
D902	D-10
D903	D-10
D904	D-10
D905	D-9
D906	F-9
D907	F-9
D909	D-9
IC101	F-6
IC102	F-7
IC221	D-2
IC222	C-2
IC223	B-2
IC224	B-4
IC253	F-2
IC301	H-2
IC401	H-13
IC901	F-9
IC902	D-9
IC903	E-9
Q101	F-5
Q201	B-3
Q231	B-2
Q232	B-2
Q233	B-2
Q252	E-3
Q253	E-3
Q903	E-9
Q904	E-9
Q906	D-9

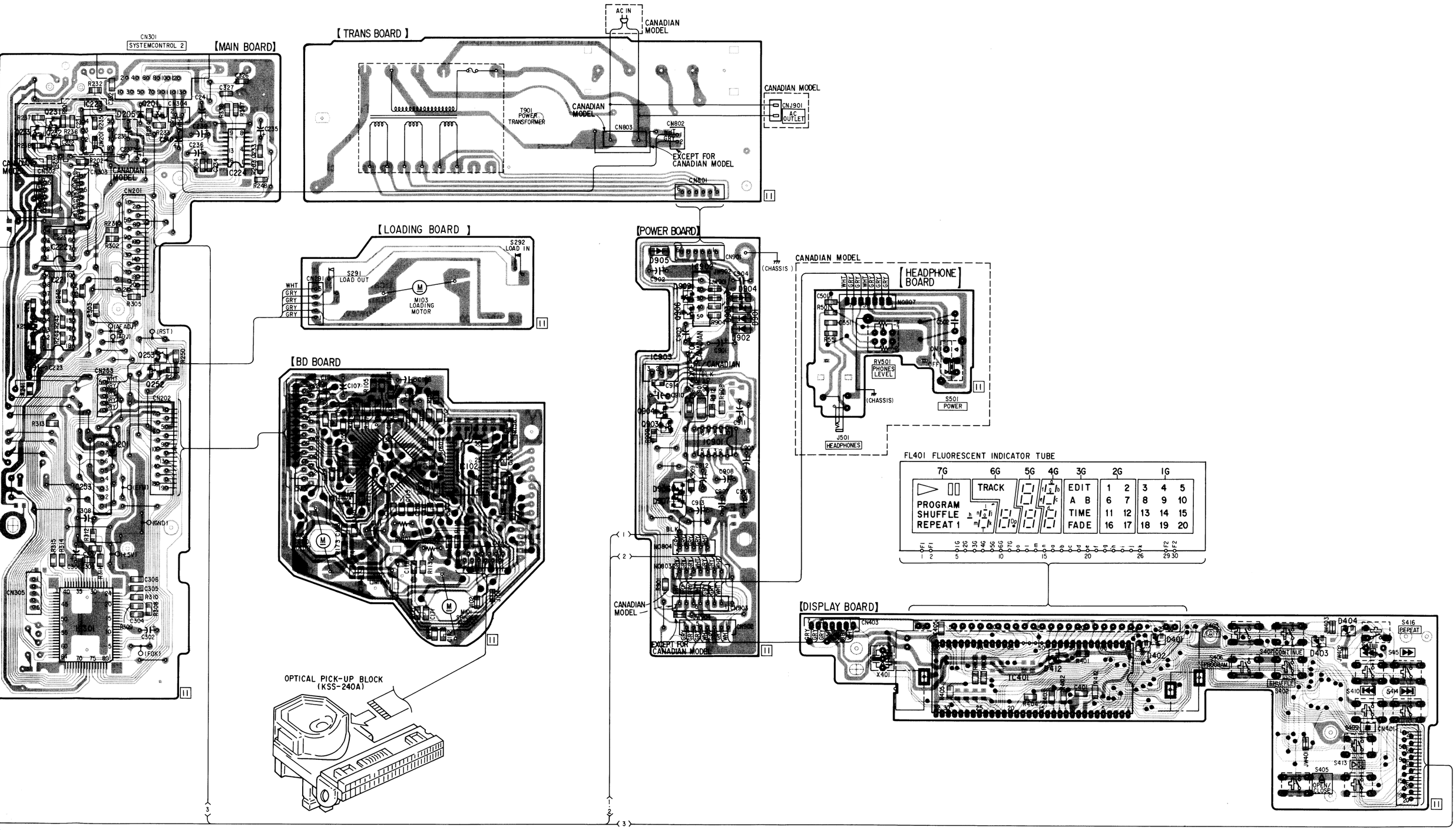
Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

3-2. PRINTED WIRING BOARDS



ED WIRING BOARDS



3-3. SCHEMATIC DIAGRAM

【BD BOARD】

OPTICAL PICK-UP BLOCK
⚠(KSS240A)

IC102
FOCUS/TRACKING COIL DRIVE
SPINDLE/SLED MOTOR DRIVE

IC
DETECTOR, RF AMP

【HEADPHONE BOARD】

CANADIAN MODEL

EXCEPT FOR CANADIAN MODEL

Q903,904 SWITCH EXCEPT FOR CANADIAN

CANADIAN

IC901
REG

【MAIN BOARD】

IC301
CX02500Q
DEGITAL SIGNAL PROCESSOR, CLV SERVO

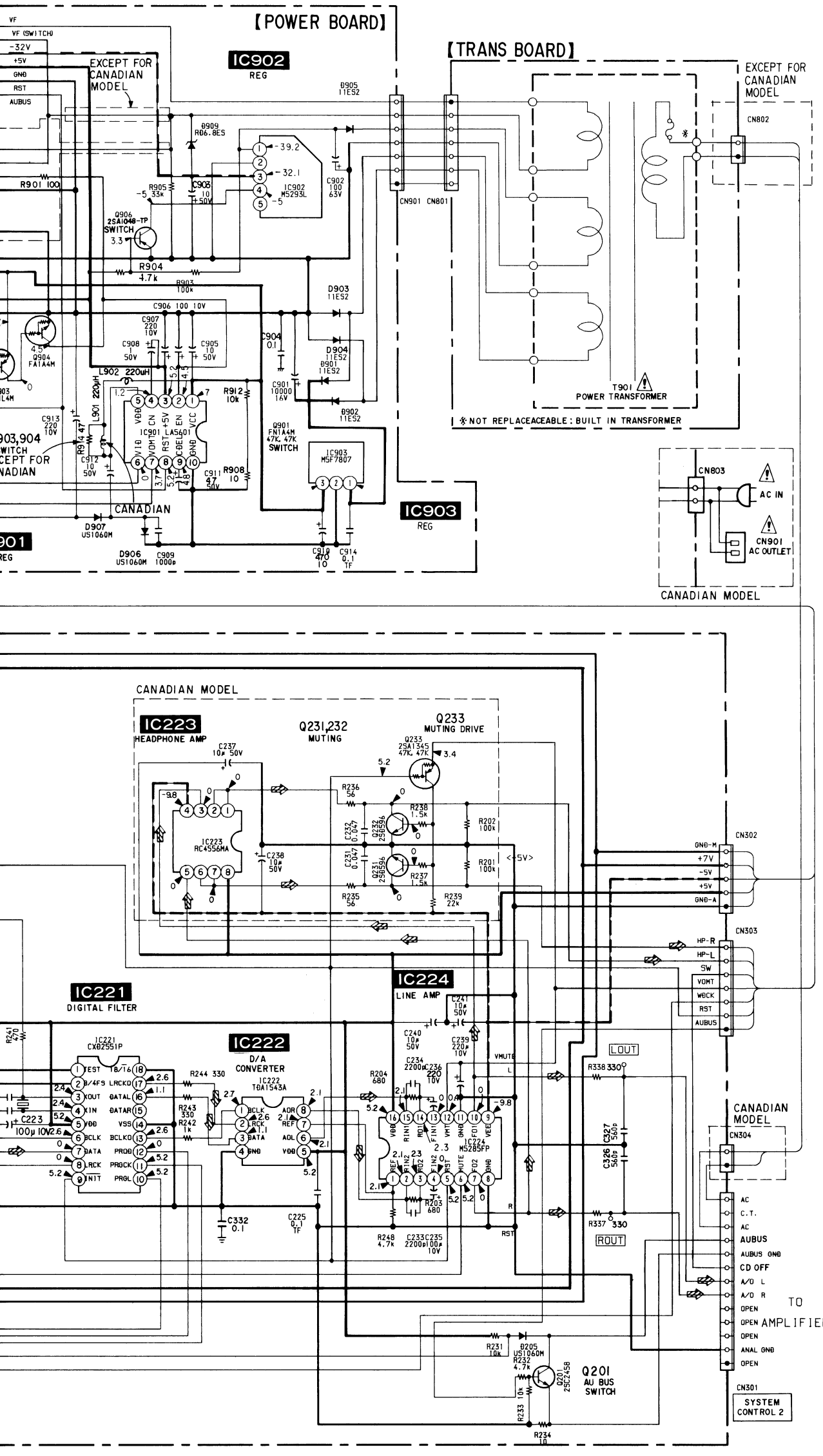
IC221
DIGITAL FILTER

IC223
HEADPHONE AMP

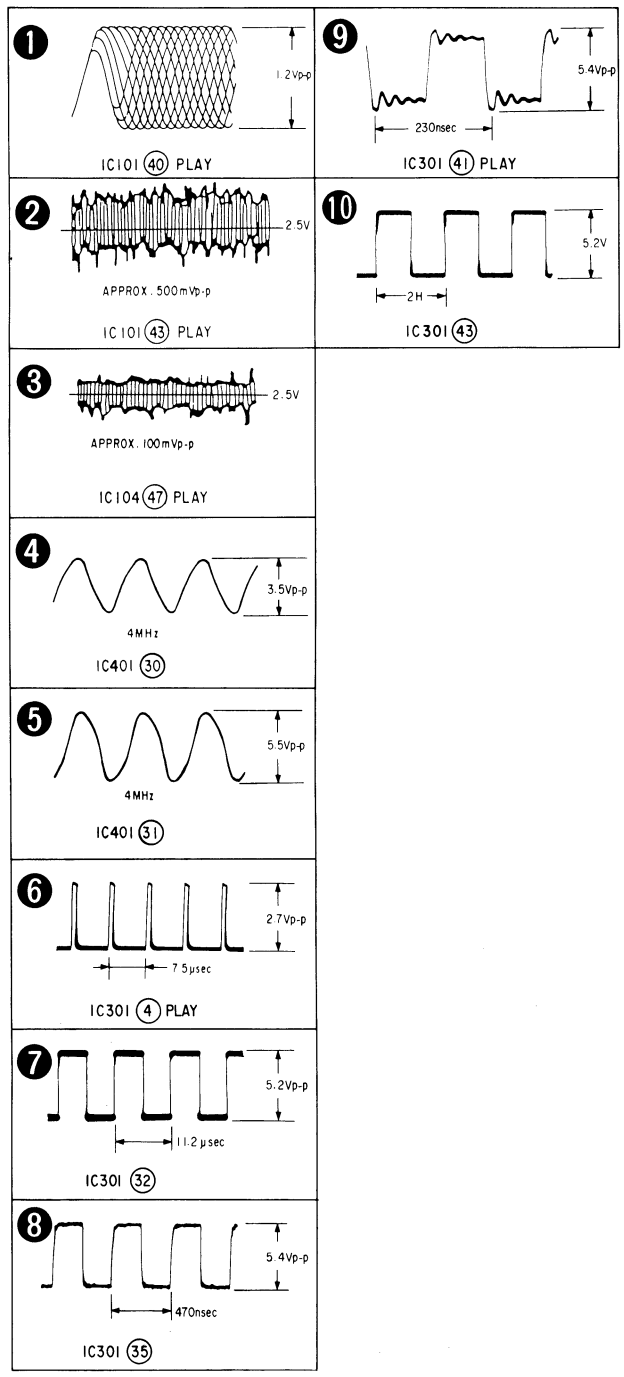
Q252,253 SWITCH

IC253
LOADING MOTOR DRIVE

【LOADING BOARD】



- **Waveforms**



Note:

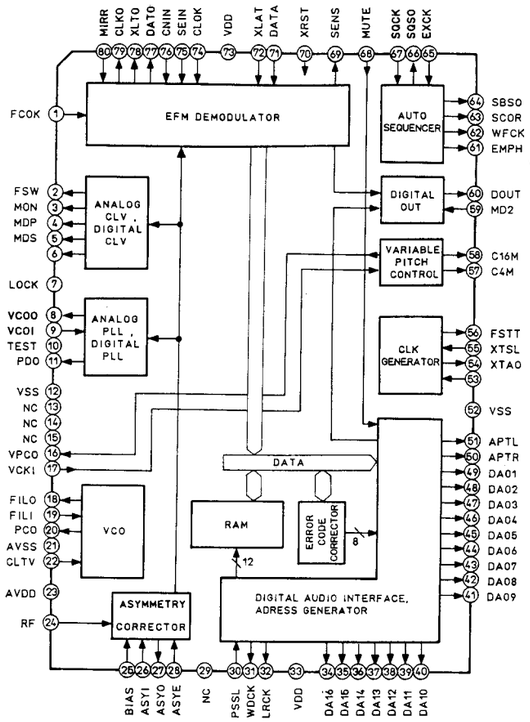
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

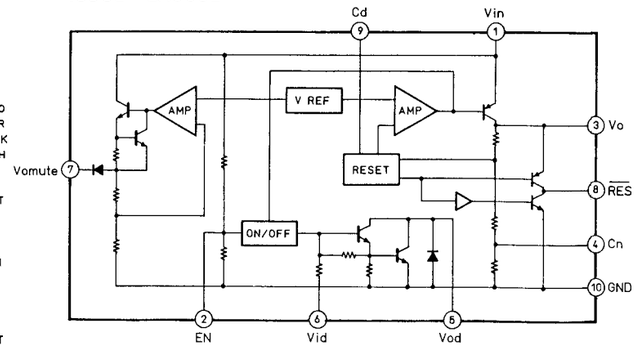
- ▬▬ : B+ Line
- ▬ ▬ ▬ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

• IC Block Diagrams

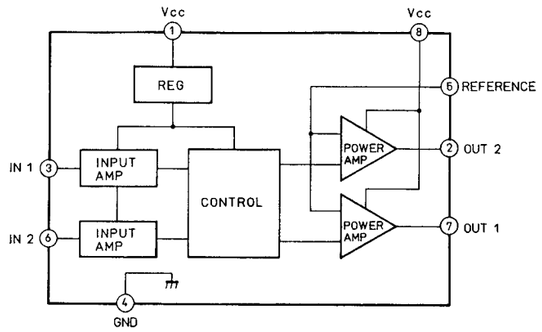
IC301 CXD2500Q



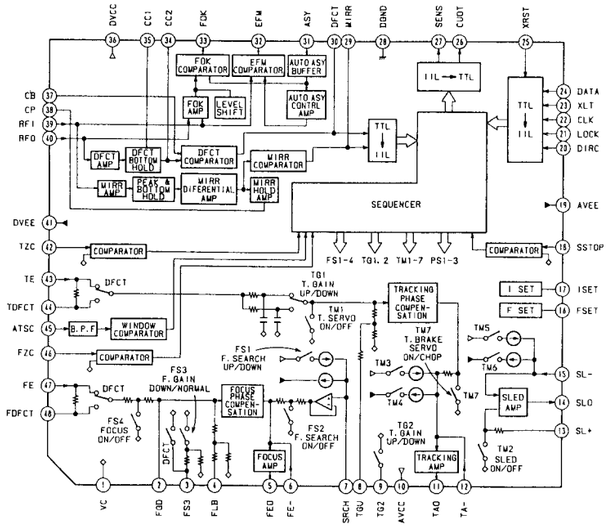
IC901 LA5601



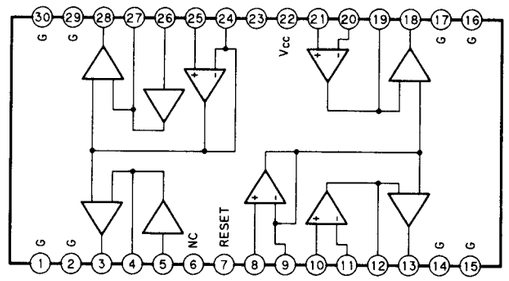
IC253 M54641L



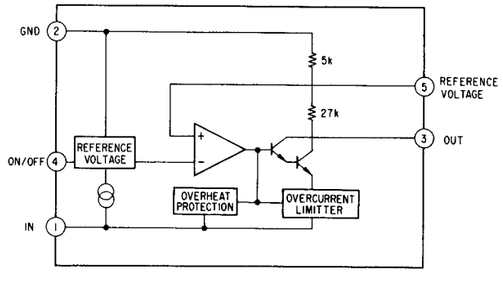
IC101 CXA1372Q



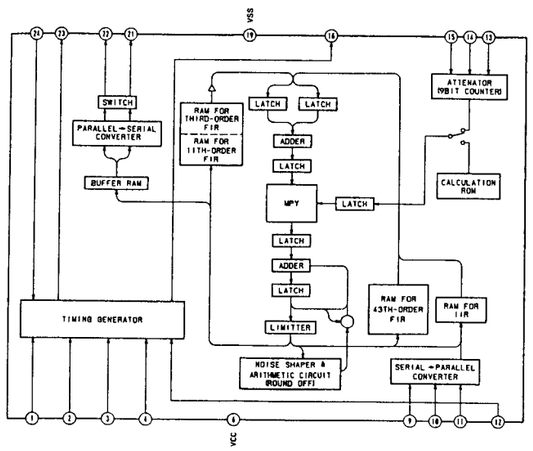
IC102 LA6532M



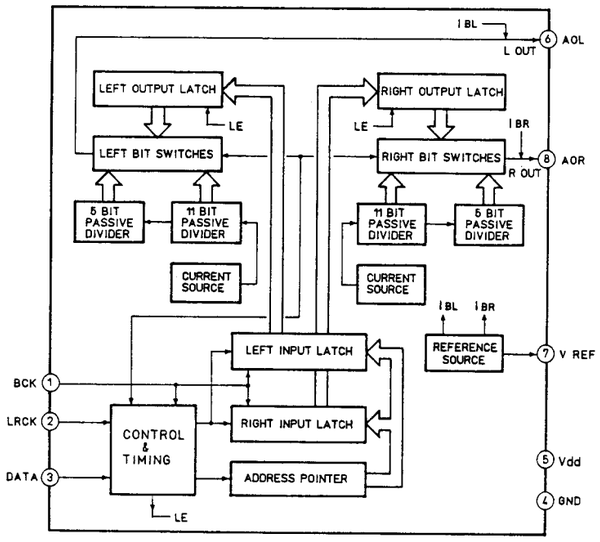
IC902 M5293L



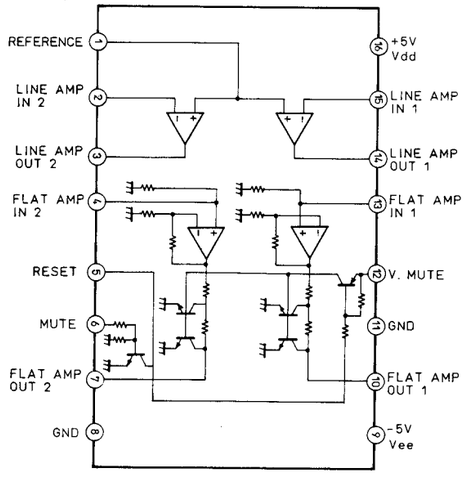
IC221 CXD2551P



IC222 TDA1543A



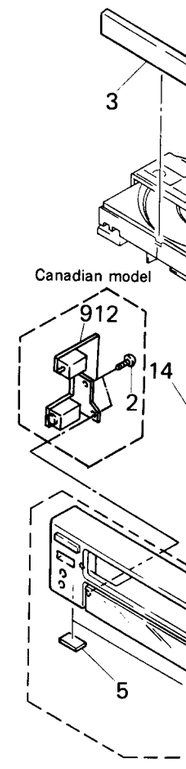
IC224 M5285FP



NOTE:

- The mechanical p number in the e supplied.
- The construction part are indicated ber in the remark
- Items marked "★ they are seldom service. Some d pated when orderi

4-1. CHASSIS S



Ref.No	Part No.	De
1	X-4929-711-1	(Excep
1	X-4929-712-1	(Cana
2	7-685-134-19	SCRE
3	4-929-753-01	PANE
4	7-682-547-04	SCRE
5	4-930-336-01	FOOT
6	*4-929-757-01	CHAS
7	*4-929-750-31	(Excep
7	*4-929-750-41	(Cana
8	4-929-742-01	SCRE
9	4-932-844-31	(Excep
9	4-932-844-41	(E)..
10	3-704-366-01	SCRE
11	7-685-646-79	SCRE
12	7-682-547-09	SCRE
13	3-831-441-XX	CUSH
14	*4-929-752-01	(Cana

SECTION 4
EXPLODED VIEWS

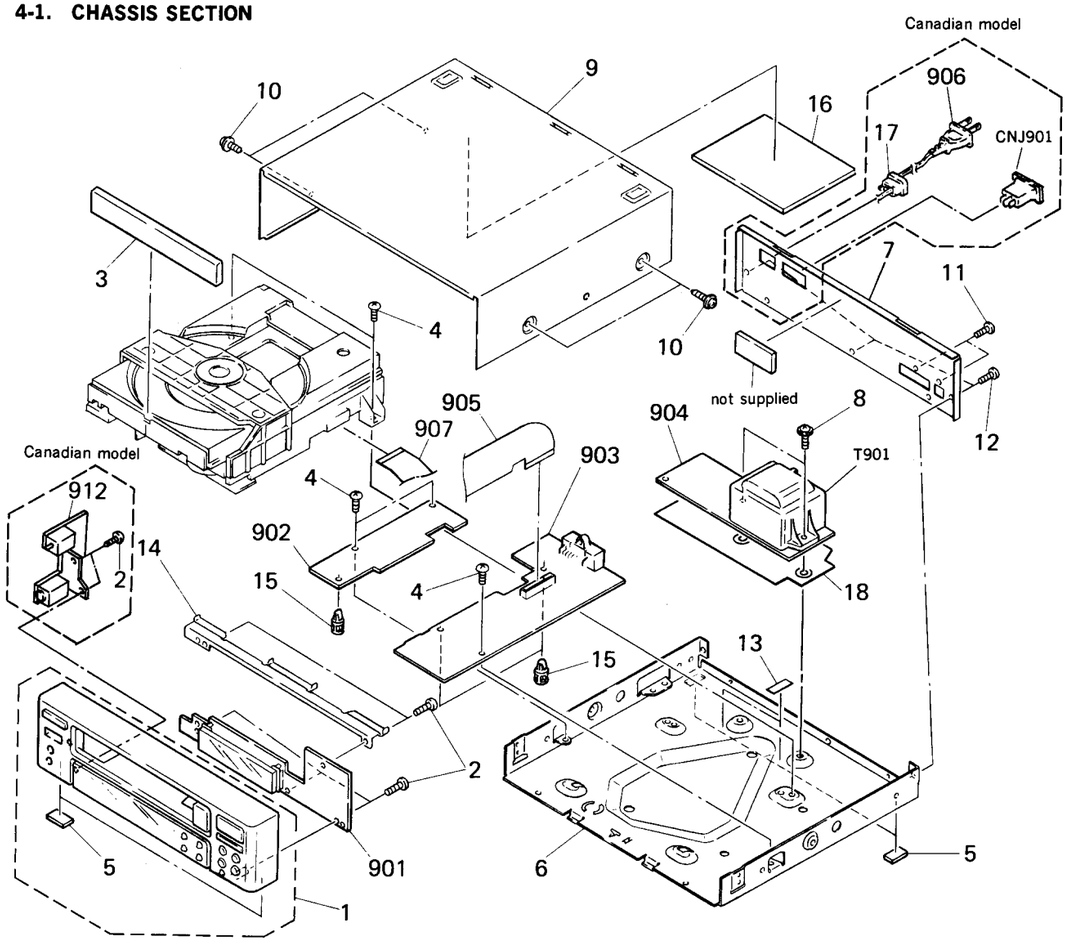
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

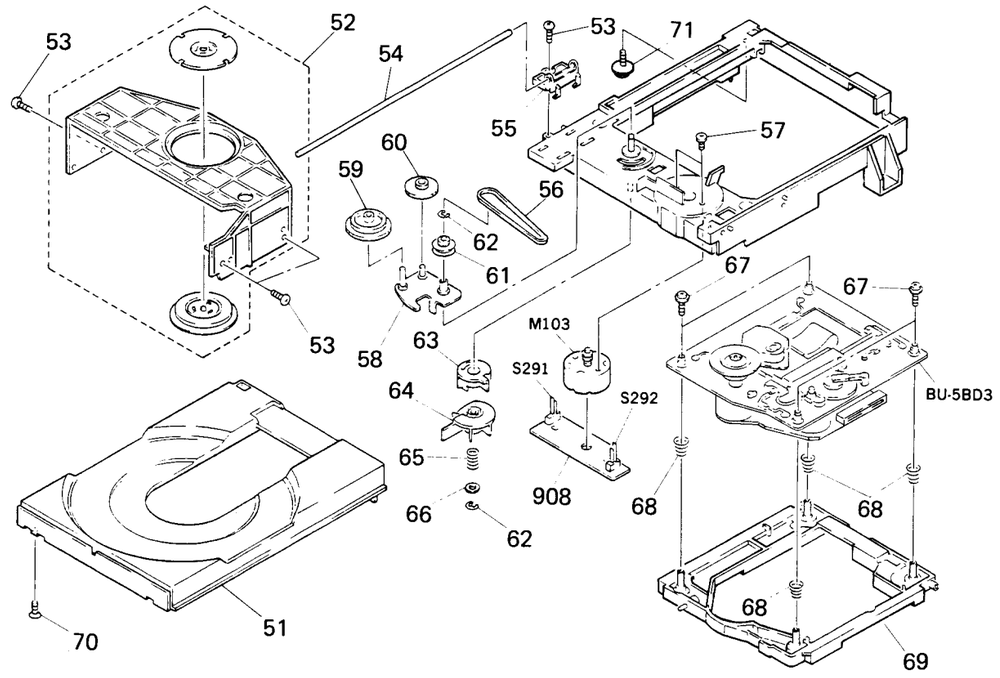
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

4-1. CHASSIS SECTION



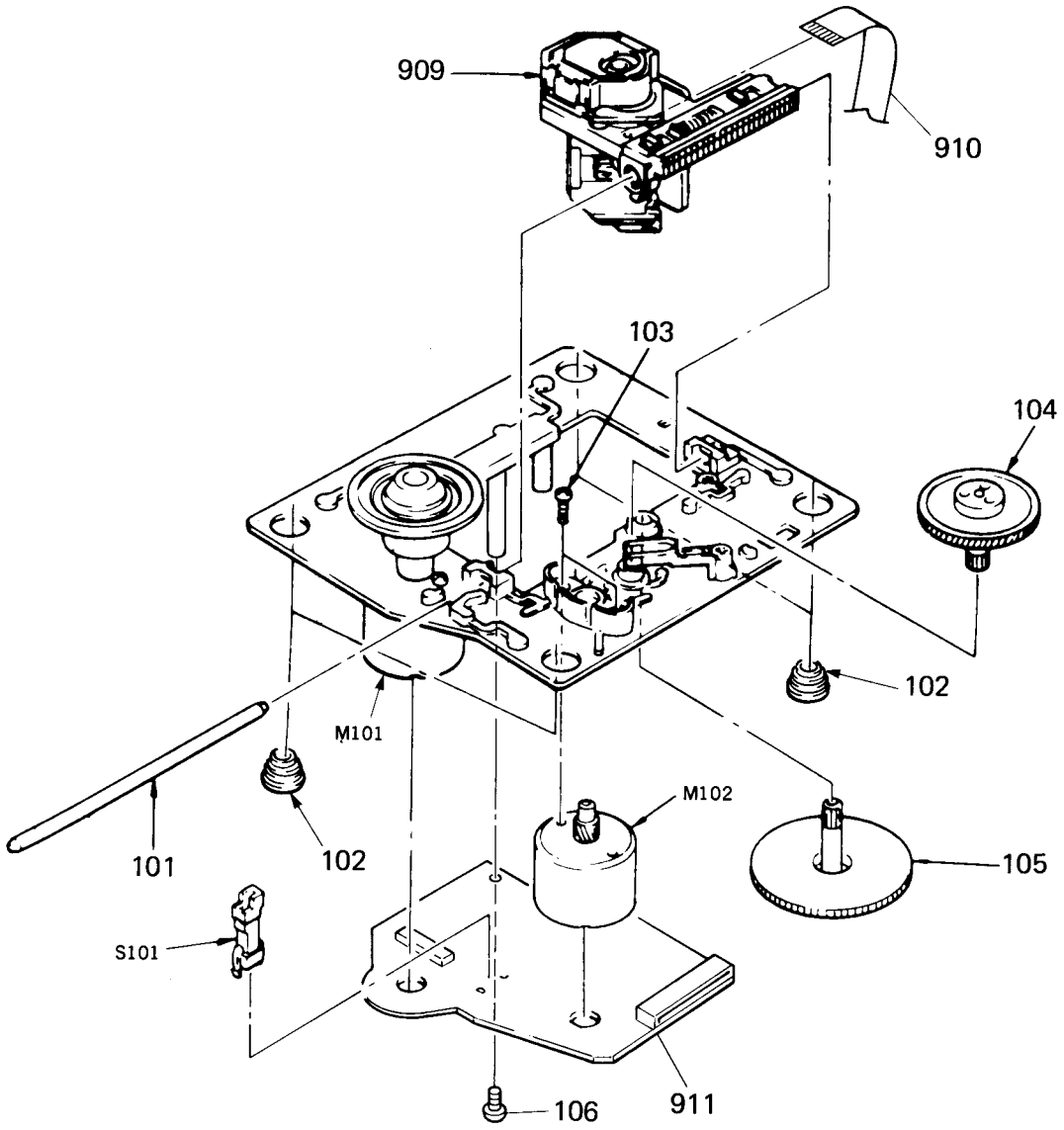
Ref.No	Part No.	Description	Remarks
1	X-4929-711-1	(Except for Canadian)....PANEL ASSY, FRONT	
1	X-4929-712-1	(Canadian)....PANEL ASSY, FRONT	
2	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
3	4-929-753-01	PANEL, LOADING	
4	7-682-547-04	SCREW +BVTT 3X6 (S)	
5	4-930-336-01	FOOT (FELT)	
6	*4-929-757-01	CHASSIS	
7	*4-929-750-31	(Except for Canadian)....PANEL, BACK	
7	*4-929-750-41	(Canadian)....PANEL, BACK	
8	4-929-742-01	SCREW (3X10), +PTTWH	
9	4-932-844-31	(Except for E)....CASE	
9	4-932-844-41	(E)....CASE	
10	3-704-366-01	SCREW (CASE) (M3X8)	
11	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
12	7-682-547-09	SCREW +BVTT 3X6 (S)	
13	3-831-441-XX	CUSHION (B), CABINET	
14	*4-929-752-01	(Canadian)....REINFORCEMENT	
15	3-682-057-11	SPACER (SMALL)	
16	*4-922-943-01	DUMPER	
17	*3-703-571-11	(Canadian)....BUSHING (S)(4516) CORD	
18	*4-929-711-01	(Canadian)....COVER (A), POWER	
19	*3-846-311-00	SPACER (D)	
901	*A-4617-397-A	MOUNTED PCB, DISPLAY	
902	*A-4617-507-A	(Canadian)....MOUNTED PCB, POWER	
902	*A-4617-400-A	(Except for Canadian)....MOUNTED PCB, POWER	
903	*A-4617-399-A	(Except for Canadian)....MOUNTED PCB, MAIN	
903	*A-4617-506-A	(Canadian)....MOUNTED PCB, MAIN	
904	*1-634-469-11	PC BOARD, TRANS	
906	⚠1-558-945-11	(Canadian)....CORD, POWER	
907	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
912	1-634-472-11	(Canadian)....PC BOARD HEADPHONES	
CNJ901	⚠1-526-882-11	(Canadian)....OUTLET, AC	
T901	⚠1-449-977-11	(Except for Canadian)....TRANSFORMER, POWER	
T901	⚠1-450-032-11	(Canadian)....TRANSFORMER, POWER	

4-2. CD MECHANISM SECTION (CDM13A-5BD3)



Ref.No	Part No.	Description	Remarks
51	4-929-732-01	TABLE, DISK	
52	A-4604-219-A	HOLDER (MG) ASSY	
53	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
54	4-929-721-01	SHAFT	
55	4-929-723-01	GUIDE (T)	
56	4-927-649-01	BELT	
57	7-621-775-10	SCREW +B 2.6X4	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-01	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-724-01	PULLEY (B)	
62	7-624-105-04	STOP RING 2.3, TYPE -E	
63	4-929-727-01	CAM (A)	
64	4-929-729-01	CAM (B)	
65	3-659-338-00	SPRING, COMPRESSION	
66	4-927-654-01	WASHER (LIMITER)	
67	4-933-134-01	SCREW (+PTPWH M2.6X6)	
68	4-917-541-01	SPRING (B)	
69	4-929-747-01	HOLDER (BU)	
70	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
71	*4-917-583-21	BRACKET, YOKE	
908	*1-634-461-11	PC BOARD LOADING	
M103	A-4608-362-A	MOTOR (L) ASSY	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

4-3. OPTICAL PICK-UP BLOCK (BU-5BD3)



Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Remarks
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	7-621-255-15	SCREW +P 2X3	
104	4-917-567-01	GEAR (M)	
105	4-917-564-01	GEAR (P), FLATNESS	
106	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	

Ref.No	Part No.	Description	Remarks
909	⚠8-848-144-11	DEVICE, OPTICAL KSS-240A	
910	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
911	*A-4617-371-A	MOUNTED PCB, BD	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH,LEAF(LIMIT IN)	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description
901	*A-4617-397-A	MOUNTED PCB, DISPLAY
902	*A-4617-507-A	(Canadian)....MOUNTED PCB, POWER
902	*A-4617-400-A	(Except for Canadian)....MOUNTED PCB, POWER
903	*A-4617-399-A	(Except for Canadian)....MOUNTED PCB, MAIN
903	*A-4617-506-A	(Canadian)....MOUNTED PCB, MAIN
904	*1-634-469-11	PC BOARD, TRANS
906	⚠1-558-945-11	(Canadian)....CORD, POWER
907	1-535-845-11	JUMPER, FILM (WITH TERMINAL)
908	*1-634-461-11	PC BOARD LOADING
909	⚠8-848-144-11	DEVICE, OPTICAL KSS-240A
910	1-575-001-11	WIRE, FLAT TYPE (12 CORE)
911	*A-4617-371-A	MOUNTED PCB, BD
912	1-634-472-11	PC BOARD HEADPHONES

CAPACITOR

C101	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C103	1-126-094-11	ELECT	4.7MF	20%	16V
C104	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C105	1-126-154-11	ELECT	47MF	20%	6.3V
C106	1-126-154-11	ELECT	47MF	20%	6.3V
C107	1-126-154-11	ELECT	47MF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C111	1-131-367-00	TANTALUM	22MF	20%	16V
C112	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C113	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C114	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C115	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C116	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C117	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C120	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C155	1-163-023-00	CERAMIC CHIP	0.015MF	10%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C221	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C222	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C223	1-124-443-00	ELECT	100MF	20%	10V
C225	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C231	1-163-035-00	(Canadian).... CERAMIC CHIP	0.047MF		50V
C232	1-163-035-00	(Canadian).... CERAMIC CHIP	0.047MF		50V
C233	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C234	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C235	1-124-443-00	ELECT	100MF	20%	10V
C236	1-126-176-11	ELECT	220MF	20%	10V
C237	1-123-875-11	(Canadian)....ELECT	10MF	20%	50V
C238	1-123-875-11	(Canadian)....ELECT	10MF	20%	50V
C239	1-126-176-11	ELECT	220MF	20%	10V
C240	1-123-875-11	ELECT	10MF	20%	50V
C241	1-123-875-11	ELECT	10MF	20%	50V
C301	1-124-443-00	ELECT	100MF	20%	10V
C302	1-124-791-11	ELECT	1MF	20%	50V
C304	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C305	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C306	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C307	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C308	1-124-902-00	ELECT	0.47MF	20%	50V
C309	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C312	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C326	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C327	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C332	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C401	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C405	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C501	1-163-035-00	(Canadian).... CERAMIC CHIP	0.047MF		50V
C502	1-136-165-00	(Canadian)....FILM	0.1MF	5%	50V
C551	1-163-035-00	(Canadian).... CERAMIC CHIP	0.047MF		50V
C901	1-126-939-11	ELECT	10000MF	20%	16V
C902	1-124-572-11	ELECT	100MF	20%	63V
C903	1-123-875-11	ELECT	10MF	20%	50V
C904	1-136-165-00	FILM	0.1MF	5%	50V
C905	1-123-875-11	ELECT	10MF	20%	50V
C906	1-124-443-00	ELECT	100MF	20%	10V
C907	1-126-923-11	ELECT	220MF	20%	10V
C908	1-124-791-11	ELECT	1MF	20%	50V
C909	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C910	1-124-472-11	ELECT	470MF	20%	10V
C911	1-124-927-11	ELECT	4.7MF	20%	50V
C912	1-123-875-11	ELECT	10MF	20%	50V
C913	1-126-923-11	ELECT	220MF	20%	10V
C914	1-136-165-00	FILM	0.1MF	5%	50V

CN101	1-568-796-11	SOCKET, CONNECTOR 22P
CN102	1-568-795-11	SOCKET, CONNECTOR 12P
CN201	1-568-838-11	SOCKET, CONNECTOR 21P
CN202	1-568-802-11	SOCKET, CONNECTOR 19P
CN253	*1-564-339-00	PIN, CONNECTOR 5P
CN291	*1-564-498-11	PIN, CONNECTOR 5P
CN301	*1-565-291-11	SOCKET, CONNECTOR 13P (SYSTEM CONTROL2)
CN302	*1-564-339-00	PIN, CONNECTOR 5P
CN303	*1-564-341-11	PIN, CONNECTOR 7P
CN305	*1-564-339-00	PIN, CONNECTOR 5P
CN401	1-569-566-11	SOCKET, CONNECTOR 20P
CN801	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P
CN802	*1-564-336-00	(Except for Canadian)....PIN, CONNECTOR 2P
CN803	*1-564-321-11	(Canadian)....PIN, CONNECTOR 2P
CN901	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P

Ref.No	Part No.	Description
CN902	* 1-564-341-11	PIN, CONNECTOR 7P
CN903	* 1-564-341-11	PIN, CONNECTOR 7P
CNJ901 ⚠	1-526-882-11	(Canadian)....OUTLET, AC
D201	8-719-010-34	DIODE UZ-4.7BSC
D205	8-719-912-20	DIODE 1SS120
D401	8-719-400-18	DIODE MA152WK
D402	8-719-400-18	DIODE MA152WK
D403	8-719-400-18	DIODE MA152WK
D404	8-719-400-18	DIODE MA152WK
D412	8-719-106-36	DIODE RD8.2M-B3
D901	8-719-210-33	DIODE EC10DS2
D902	8-719-210-33	DIODE EC10DS2
D903	8-719-210-33	DIODE EC10DS2
D904	8-719-210-33	DIODE EC10DS2
D905	8-719-210-33	DIODE EC10DS2
D906	8-719-104-34	DIODE 1S2836
D907	8-719-104-34	DIODE 1S2836
D909	8-719-106-17	DIODE RD6.8M-B2
FLD401	1-519-600-11	INDICATOR TUBE, FLUORESCENT
IC101	8-752-037-33	IC CXA1372Q
IC102	8-759-821-94	IC LA6532M
IC221	8-752-334-06	IC CXD2551P
IC222	8-759-990-13	IC TDA1543A
IC223	8-759-945-58	(Canadian)....IC RC4558P
IC224	8-759-633-66	IC M5285FP
IC253	8-759-633-65	IC M54641L
IC301	8-752-333-31	IC CXD2500Q
IC401	8-759-149-38	IC UPD75212ACW-190
IC901	8-759-821-93	IC LA5601
IC902	8-759-633-42	IC M5293L
IC903	8-759-604-86	IC M5F7807
J101	1-216-295-00	METAL GLAZE 0 5% 1/10W
J102	1-216-295-00	METAL GLAZE 0 5% 1/10W
J501	1-507-967-31	(Canadian)....JACK (HEADPHONES)
JW201	1-216-295-00	METAL GLAZE 0 5% 1/10W
JW401	1-216-295-00	METAL GLAZE 0 5% 1/10W
JW402	1-216-295-00	METAL GLAZE 0 5% 1/10W
JW403	1-216-295-00	METAL GLAZE 0 5% 1/10W
L901	1-410-658-31	INDUCTOR CHIP 220UH
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)
M102	X-4917-504-1	MOTOR ASSY (SLED)
M103	A-4608-362-A	MOTOR (L) ASSY
Q101	8-729-901-01	TRANSISTOR DTC144EK
Q201	8-729-100-66	TRANSISTOR 2SC1623
Q231	8-729-141-75	(Canadian)....TRANSISTOR 2SD596DV345
Q232	8-729-141-75	(Canadian)....TRANSISTOR 2SD596DV345
Q233	8-729-113-66	(Canadian)....TRANSISTOR FN1L4M-M31
Q252	8-729-112-97	TRANSISTOR FA1L4M-L31
Q253	8-729-112-97	TRANSISTOR FA1L4M-L31
Q903	8-729-113-66	TRANSISTOR FN1L4M-M31
Q904	8-729-113-13	TRANSISTOR FA1A4M-L33
Q906	8-729-216-22	TRANSISTOR 2SA1162

RESISTOR

R101	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R102	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R103	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R104	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R105	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R106	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R109	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R110	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R111	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R112	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R113	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R114	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R152	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R153	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R154	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R155	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R156	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R157	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R158	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R159	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R160	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R171	1-216-001-00	METAL GLAZE	10	5%	1/10W
R172	1-216-001-00	METAL GLAZE	10	5%	1/10W
R173	1-216-001-00	METAL GLAZE	10	5%	1/10W
R174	1-216-001-00	METAL GLAZE	10	5%	1/10W
R201	1-216-097-00	(Canadian).... METAL GLAZE	100K	5%	1/10W
R202	1-216-097-00	(Canadian).... METAL GLAZE	100K	5%	1/10W
R203	1-216-045-00	METAL GLAZE	680	5%	1/10W
R204	1-216-045-00	METAL GLAZE	680	5%	1/10W
R231	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R232	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R233	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R234	1-216-001-00	METAL GLAZE	10	5%	1/10W
R235	1-216-019-00	(Canadian).... METAL GLAZE	56	5%	1/10W
R236	1-216-019-00	(Canadian).... METAL GLAZE	56	5%	1/10W
R237	1-216-053-00	(Canadian).... METAL GLAZE	1.5K	5%	1/10W
R238	1-216-053-00	(Canadian).... METAL GLAZE	1.5K	5%	1/10W
R241	1-216-041-00	METAL GLAZE	470	5%	1/10W
R242	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R243	1-216-037-00	METAL GLAZE	330	5%	1/10W
R244	1-216-037-00	METAL GLAZE	330	5%	1/10W
R248	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R249	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R250	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R302	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R303	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R304	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R305	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R308	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R309	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R310	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R311	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R312	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R313	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R314	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R315	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R337	1-216-037-00	METAL GLAZE	330	5%	1/10W
R338	1-216-037-00	METAL GLAZE	330	5%	1/10W
R401	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R402	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R403	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R404	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R405	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R406	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R407	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

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Ref.No	Part No.	Description			
R412	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R501	1-216-019-00	(Canadian).... METAL GLAZE	56	5%	1/10W
R551	1-216-019-00	(Canadian).... METAL GLAZE	56	5%	1/10W
R901	1-216-025-00	METAL GLAZE	100	5%	1/10W
R903	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R904	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R905	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R906	1-216-017-00	METAL GLAZE	47	5%	1/10W
R908	1-216-001-00	METAL GLAZE	10	5%	1/10W
R909	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R912	1-216-073-00	METAL GLAZE	10K	5%	1/10W
RV101	1-238-016-11	RES, ADJ, CARBON 10K			
RV102	1-238-016-11	RES, ADJ, CARBON 10K			
RV501	1-238-302-11	(Canadian)....RES,VER,CARBON 1K/1K (PHONES LEVEL)			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)			
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)			
S402	1-554-596-21	SWITCH, KEY BOARD (SHUFFLE)			
S403	1-554-596-21	SWITCH, KEY BOARD (EDIT)			
S405	1-554-596-21	SWITCH, KEY BOARD (⏏OPEN/CLOSE)			
S406	1-554-596-21	SWITCH, KEY BOARD (PROGRAM)			
S407	1-554-596-21	SWITCH, KEY BOARD (CONTINUE)			
S409	1-554-596-21	SWITCH, KEY BOARD (■)			
S410	1-554-596-21	SWITCH, KEY BOARD (⏮)			
S411	1-554-596-21	SWITCH, KEY BOARD (◀◀)			
S413	1-554-596-21	SWITCH, KEY BOARD (▷II)			
S414	1-554-596-21	SWITCH, KEY BOARD (▶▶I)			
S415	1-554-596-21	SWITCH, KEY BOARD (▶▶)			
S416	1-572-184-11	SWITCH, KEY BOARD (REPEAT)			
S501	⚠1-552-98-00	(Canadian)....SWITCH (POWER)			
T901	⚠1-449-977-11	(Except for Canadian)....TRANSFORMER, POWER			
T901	⚠1-450-032-11	(Canadian)....TRANSFORMER, POWER			
X251	1-567-908-11	VIBRATOR, CRYSTAL (16.9344MHz)			
X401	1-577-358-21	VIBRATOR, CERAMIC (4.0MHz)			

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